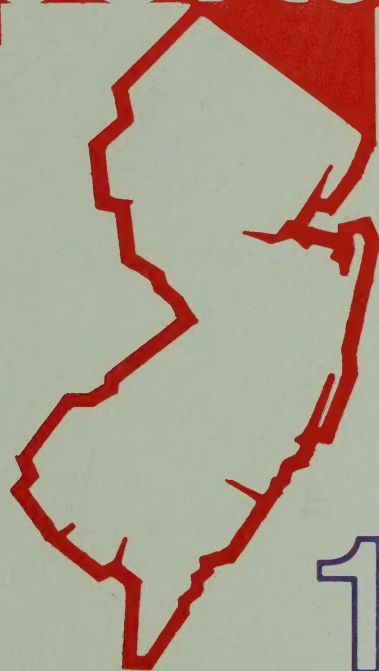


# New Jersey Transportation Plan



1984

*Thomas H. Kean, Governor  
John P. Sheridan, Jr., Commissioner*

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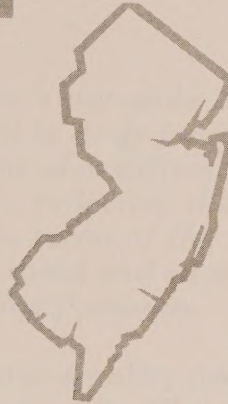
New Jersey Department of Transportation



*Prepared by the*  
**NEW JERSEY DEPARTMENT OF TRANSPORTATION**  
*in cooperation with the*  
**U.S. DEPARTMENT OF TRANSPORTATION**  
**FEDERAL HIGHWAY ADMINISTRATION**  
**URBAN MASS TRANSPORTATION ADMINISTRATION**



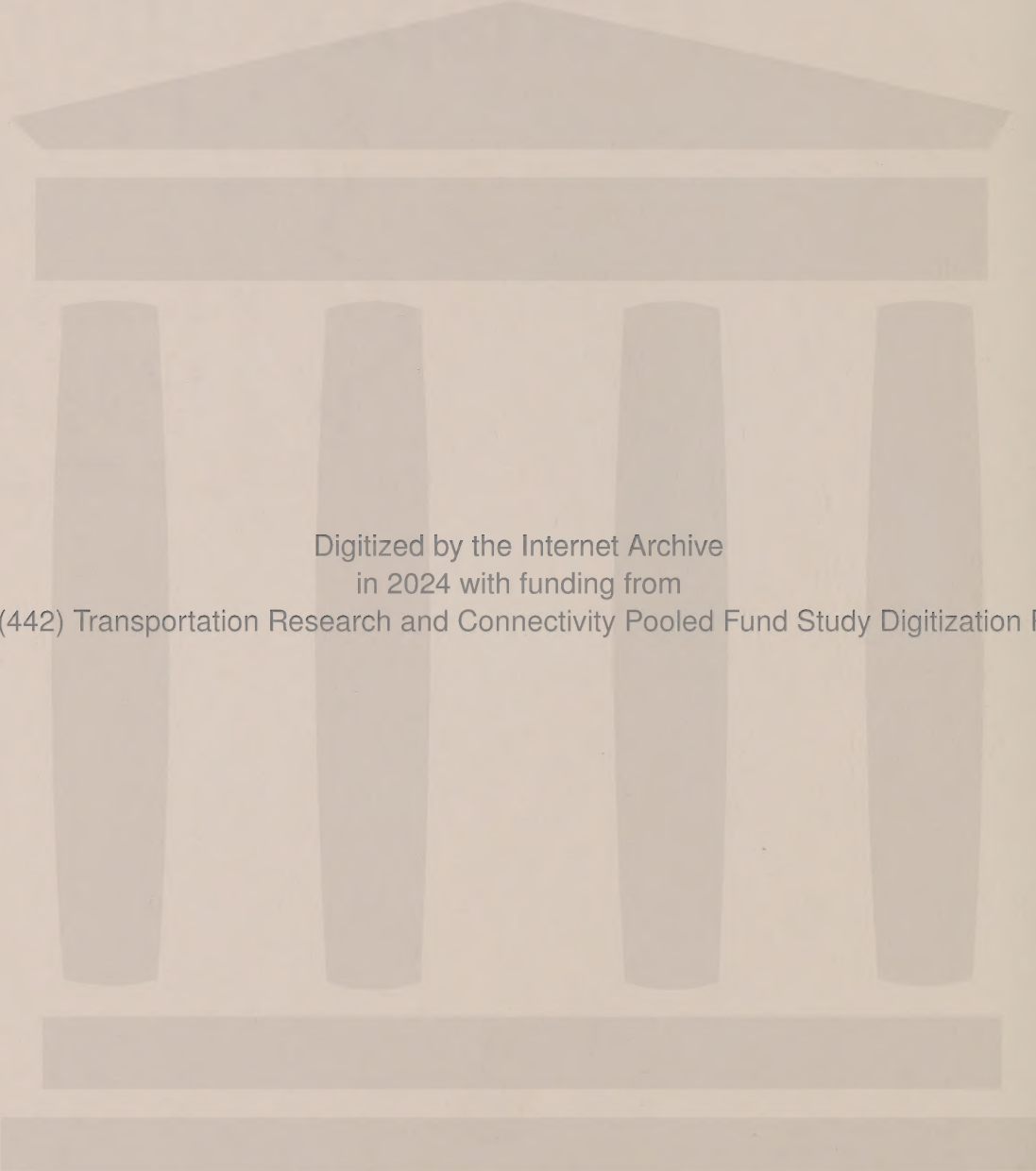
# New Jersey Transportation Plan



December  
1984

Thomas H. Kean, Governor  
John P. Sheridan, Jr., Commissioner

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**State of New Jersey**  
**DEPARTMENT OF TRANSPORTATION**

JOHN P. SHERIDAN JR.  
COMMISSIONER

1035 PARKWAY AVENUE  
CN 600  
TRENTON, NEW JERSEY 08625

*To the Citizens of New Jersey:*

*I am pleased to present New Jersey's statewide Transportation Plan. First conceived in draft form in several installments in 1979-1982, the present plan differs fundamentally from its predecessors, reflecting the dramatic changes since the last plan in 1972 in terms of the demography of the State, increased social and environmental awareness, and transportation funding prospects.*

*The plan consolidates in one volume a policy framework, a short range plan, and a longer range agenda. The policy framework discusses the major issues affecting transportation which now confront the State, and the State's goals, objectives, and program policies in responding to these issues. The short range plan describes the projects and studies scheduled for the next several years in light of the passage of the landmark Transportation Trust Fund legislation and subsequent passage of the gas tax dedication referendum. The longer range agenda describes transportation problems which the State expects to face beyond the next several years, and the State's plans for addressing these problems.*

*As called for by State statute, the State intends to update and publish a statewide transportation plan every five years. As a "blueprint" for the next five years, a plan such as this is an important public disclosure, and deserves your careful review. I urge you to do so, and invite your comment.*

*Sincerely,*

A handwritten signature in blue ink that reads "John P. Sheridan Jr.".

John P. Sheridan, Jr.  
Commissioner of Transportation





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# I. INTRODUCTION

The Transportation Act of 1966 which created the New Jersey Department of Transportation (NJDOT) requires the Department to develop and maintain a comprehensive Transportation Master Plan. Whereas the original provisions of the Act did not specify a time period for updating the plan, a 1979 amendment to the legislation placed a five year time limit on revising the plan. Additionally, the New Jersey Transportation Trust Fund Authority Act of 1984, approved July 10, 1984, requires the Department to produce a plan update on or before December 15, 1984, and at five year intervals thereafter.

Since the original Act, the NJDOT has published two "official" transportation plans, one in 1968 and a second in 1972. Both of these plans were traditional master plans, delineating as they did a set of new highways, existing highway widenings, and specific mass transportation improvements to meet projected, 20-25 year traffic demands. Since these plans were prepared, the conventional wisdom about master plans has changed profoundly. For the reasons cited below, master plans have become more policy oriented, shorter range in perspective, and fiscally restrained; the traditional practice of delineating specific long-range improvements has largely ceased:

(1) Long-range futures are difficult to forecast and fraught with uncertainty. Traditional master plans portrayed the future with far more certainty than forecasting confidence warranted, and consequently plans were often invalidated by unforeseen events shortly after publication.

(2) Even in the short-range, *problems* requiring solutions are identified far more easily than the solutions to these problems. Solutions require knowledge about environmental conditions, community attitudes, and funding prospects, which is generally not available until project level planning has been undertaken. Solutions prescribed in master plans in the absence of such information are often judged later to be infeasible or unwarranted.

(3) Traditional master plans have generally failed to account for financial resource limitations. The traditional master plan, with its long list of recommended projects and inattention to the resource allocation questions that this Department and other state DOTs must confront, is not instructive.

For all the foregoing reasons, the Department believes its present master plan must be defined differently than previous plans. It identifies existing and anticipated problems, sets overall priorities for tackling these problems, and acknowledges that solutions to these problems will be defined only after careful analysis and consideration of community attitudes.

The present plan differs from previous plans in another important respect. Unlike previous plans, there has been extensive public participation in the formulation of the



present plan. Over the past several years, draft elements of the plan were prepared and widely disseminated, and meetings were held at various locations throughout the state to provide an opportunity for public discussion. This public participation provided valuable feedback for the Department, and the content of the present plan has been shaped in part by this feedback. The specific elements of the plan published previously in draft included: a document discussing goals, objectives, and program policies published in 1979; a short range element published in 1981; and a long range element published later in 1981. The present plan encompasses all of these elements (in substantially amended form, to account for public reactions and changed circumstances) and additional materials developed more recently.

## II. THE TRANSPORTATION PARTNERSHIP

Although the Department of Transportation has the legislated responsibility to develop and maintain the statewide transportation plan, there are numerous governmental bodies, autonomous authorities and agencies involved in serving the transportation interests of the state, which makes for a complex set of interrelationships. A brief description of each of the "partners" involved in this set of interrelationships and the process of planning, programming, and implementing transportation improvements provides useful background to the ensuing sections of the plan.



### A. The State Transportation Agency

NJDOT can trace its origins back to 1891, when the state Legislature designated the President of the State Board of Agriculture to be the Administrator of Roads. Since that time, numerous changes in organization and responsibilities have occurred, culminating in the legislative establishment of the Department of Transportation on July 1, 1966. New Jersey has the distinction of being the first state in the continental United States to adopt the concept of an integrated approach to all transportation problems.

The 1966 Act as amended specifically directs the Commissioner of Transportation to assume the following responsibilities:

- Develop and maintain a comprehensive master plan for all modes of transportation development, with special emphasis on public transportation. Such plan shall be revised and updated at least every 5 years;
- Develop and promote programs to foster efficient and economical transportation services in the state;
- Prepare plans for the preservation, improvement and expansion of the public transportation system, with special emphasis on the coordination of transit modes and the use of rail rights-of-way, highways and public streets for public transportation purposes;
- Enter into contracts with the New Jersey Transit Corporation for the provision and improvement of public transportation services;
- Coordinate the transportation activities of the Department with those of other public agencies and authorities;

- Cooperate with interstate commissions and authorities, State departments, councils, commissions and other State agencies, with appropriate federal agencies, and with interested private individuals and organizations in the coordination of plans and policies for the development of air commerce and air facilities;
- Make an annual report to the Governor and the Legislature of the Department's operations, and render such other reports as the Governor shall from time to time request or as may be required by law;
- Promulgate regulations providing for the charging of and setting the amount of fees for certain services performed by and permits issued by the Department, including but not limited to the following:
  - Aeronautics permits;
  - Access and driveway permits along state highways;
  - Right-of-way permits;
  - Traffic control systems;
- Regulate privately operated public transportation operations within the state;
- Plan, design, construct, equip, operate, improve and maintain a railroad, subway, street, traction or electric railway for the purpose of carrying freight in this State or between points in this State and points in other states; and
- Maintenance of over 2,200 miles of highways and streets of statewide significance.

## **B. New Jersey Transit Corporation (NJ TRANSIT)**

NJ TRANSIT was created on December 10, 1979 to unify and rationalize New Jersey's public transportation system and to reverse years of decline in public transit service quality and ridership.

Drawing upon its statutory mandate, NJ TRANSIT has defined its mission as follows:

- Improve service for existing riders;
- Attract new ridership, maximize the benefits of capital investments;
- Limit operating deficits; and
- Strengthen New Jersey's economic and social vitality through improved mobility.

To accomplish this, a more specific set of goals has been established and each NJ TRANSIT program or project is geared toward meeting those goals. These goals include, but are not limited to, the following:

- Provide reliable service.
- Provide convenient service, including direct, no-transfer service, and ease of passenger use.
- Provide comfortable service. This translates into temperature controlled vehicles which are clean and have adequate capacity.
- Provide safe service, which translates into reductions in accidents and crime.
- Provide accessible service, which translates into broad geographic coverage, serving a wide variety of activity centers, and as much of New Jersey's population as is practical, especially those without automobiles.
- Provide speedy service, competitive where possible with automobile travel.
- Provide service which supports urban revitalization and new development with transit supporting densities.



While NJ TRANSIT is self-regulating as to fares and levels of service which it operates or supports, NJDOT retains regulatory control over safety and maintenance.

NJ TRANSIT is responsible for the operation and maintenance of the state's commuter rail system, the Newark City Subway and over 150 bus routes throughout the state.

### C. Authorities and Commissions

New Jersey has a number of authorities and commissions which are either directly responsible for the construction and maintenance of transportation facilities, or responsible for the development of specifically defined geographic areas which obviously impact the transportation system. Cooperation among these agencies is essential to the development of a unified, statewide transportation plan.

With the exception of the Palisades Interstate Park Commission, those agencies which directly administer transportation facilities were created by statute as bodies politic and corporate and as such are independent bodies with the power to issue bonds to support projects of valid public purpose as provided in their respective statutes. They are not, in any way, subject to the direct control, direction or leadership of the Commissioner of Transportation. However, the Governor, by law, is granted veto power over several of the agencies' actions and looks to the Transportation Commissioner for advice in performing this function.

- **The New Jersey Turnpike Authority** was created by the State Legislature in 1948. Its primary function was to build a 118 mile turnpike from the Delaware Memorial Bridge to the George Washington Bridge, thereby linking Delaware, New Jersey, and New York. Construction of the initially designated section began in 1949 and ended in early 1952 when the turnpike was opened to traffic. Subsequent additions included an eight mile spur from the vicinity of Newark Airport to the Holland Tunnel (1956), a spur connecting the turnpike in the vicinity of Bordentown with the Pennsylvania Turnpike (1956), and a ten mile spur to Route 46 in Ridgefield (1970).
- **The New Jersey Highway Authority** was created by the State Legislature in 1952. Its primary function was to complete the construction of the proposed Route 4 Parkway (which has since been designated the Garden State Parkway) from Paramus to Cape May. Because of earlier legislation, four small sections of the originally designated Parkway were constructed by the (then) State Highway Department. These sections remain toll-free today under the jurisdiction of the Department of Transportation.

The entire length of the originally designated Parkway was opened to traffic in July 1955. In 1956, the Authority entered into an agreement with the New York State Thruway Authority for the construction of a link between the two toll facilities. In August, 1957, a nine mile extension from Paramus to Suffern was opened.
- **The New Jersey Expressway Authority** was created by the State Legislature in 1962. This Authority was created to construct the Atlantic City Expressway from Route 42 at Turnersville in Camden County to its eastern terminus in Atlantic City. The expressway, which spans a distance of 44 miles, was completed on July 31, 1965.
- **The Palisades Interstate Park Commission** was established by compact between the States of New York and New Jersey in 1937. The Commission administers the Palisades Interstate Park which

extends along the west shore of the Hudson River from Fort Lee, New Jersey into New York State. A major toll-free thoroughfare, the Palisades Interstate Parkway, goes through the Park and is administered by the Commission.

- **The Delaware River Joint Toll Bridge Commission** was established in 1934 by agreement between New Jersey and Pennsylvania. This Commission was created to take over operation of joint state-owned bridges north of the Pennsylvania Railroad Bridge at Trenton. In addition, the Commission was authorized to construct new bridges. In 1947, a supplemental agreement enlarged the Commission's jurisdiction to include the area as far south as the boundary line between Mercer County and Burlington County. The Commission was authorized to replace existing bridges at such locations as it might determine and to construct necessary approach highways. A supplemental compact in 1953 authorized the Commission to construct and operate port and terminal facilities north of the Philadelphia-Bucks County Line.

The district of jurisdiction in New Jersey includes all of Sussex, Warren, Hunterdon and Mercer Counties plus that part of Burlington County north of the Rancocas Creek. The Commission presently operates 18 bridges—5 toll and 13 free.

- **The Burlington County Bridge Commission** was created when the Burlington-Bristol Bridge Company purchased the outstanding stock of the Tacony-Palmyra Bridge Company. Subsequently, the Burlington-Bristol Bridge Company was bought by the Burlington County Bridge Commission, created by an act of the New Jersey Legislature, in October of 1948. The Commission owns and operates two interstate toll bridges, namely the Burlington-Bristol Bridge, connecting Burlington, New Jersey with Bristol, Pennsylvania, and the Tacony-Palmyra Bridge, connecting Tacony, Pennsylvania with Palmyra, New Jersey.
- **The Cape May County Bridge Commission** was created by an act of the New Jersey Legislature in February of 1934. The Commission presently operates eight facilities in Cape May County: five toll drawbridges; one free drawbridge; and two free fixed bridges.
- **The Delaware River and Bay Authority** was created when the States of Delaware and New Jersey entered into a compact in 1961. The Authority was created as a body politic and an agency of Government of both states.

The purposes of its creation are the planning, financing, construction and operation of river crossings with appropriate connections between the two states, across the Delaware River or Bay at any location south of the boundary line between Delaware and Pennsylvania as extended across the Delaware River to New Jersey. The Authority is also authorized to plan, finance, construct and operate transportation or terminal facilities within those same areas.

The facilities operated by this Authority include the Delaware Memorial Bridge and the Cape May-Lewes Ferry.

- **The Port Authority of New York and New Jersey** traces its origins to the Interstate Compact of 1921, "for the Creation of the Port of New York District and the Establishment of the Port of New York Authority for the Comprehensive Development of the Port of New York."

Under the bi-state compact, the Port Authority is charged with two major responsibilities: "to purchase, construct, lease and/or operate any terminal or transportation facility within said (port) district; and to promote the commerce of the port and protect it from inequitable transportation charges and practices."

The Port District covered by the compact includes all or parts of 9 counties in northeastern New Jersey. Transportation facilities currently owned and operated by the Authority which are located partially or totally in New Jersey include:

— **Airports and Heliports**

Newark International Airport  
Teterboro Airport

— **Marine Terminals**

Elizabeth-Port Authority Marine Terminal  
Port Newark  
Hoboken-Port Authority Marine Terminal

— **Rail Facilities**

Port Authority Trans-Hudson (PATH) System

— **Terminals**

Newark Union Motor Truck Terminal

— **Tunnels and Bridges**

George Washington Bridge

Outerbridge Crossing

Bayonne Bridge

Holland Tunnel

Goethals Bridge

Lincoln Tunnel

- **The Delaware River Port Authority** was created in 1951 by compact between the Commonwealth of Pennsylvania and the State of New Jersey. It replaced the Delaware River Joint Commission which originated in 1932.

The "Port District" includes the counties of Delaware and Philadelphia in Pennsylvania and the counties of Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean and Salem in New Jersey.

The facilities currently operated by the Delaware River Port Authority include the Walt Whitman Bridge, Benjamin Franklin Bridge, Betsy Ross Bridge, Commodore Barry Bridge, and the Lindenwold-Philadelphia Rapid Transit Line (PATCO).

## **D. Metropolitan Planning Organizations**

The Federal-Aid Highway Act of 1962 and the Urban Mass Transportation Act of 1964 stipulated that all projects in urban areas of 50,000 or more population be based on a comprehensive, cooperative and continuing (3-C) transportation planning process. This was the genesis of the present day, comprehensive transportation project development process (which is described in Section III of the Plan) and led to the creation of the six metropolitan planning organizations which are intimately involved in transportation planning and programming activities in the state (see Figure. 1).

Collectively, the geographic areas covered by the MPO's encompass about 85% of the population of the state. The MPO's vary widely in size and character from the complex bi-state multiple county agency of the Delaware Valley Regional Planning Commission to several smaller agencies each covering only a portion of an individual county.

## **E. County and Local Governments**

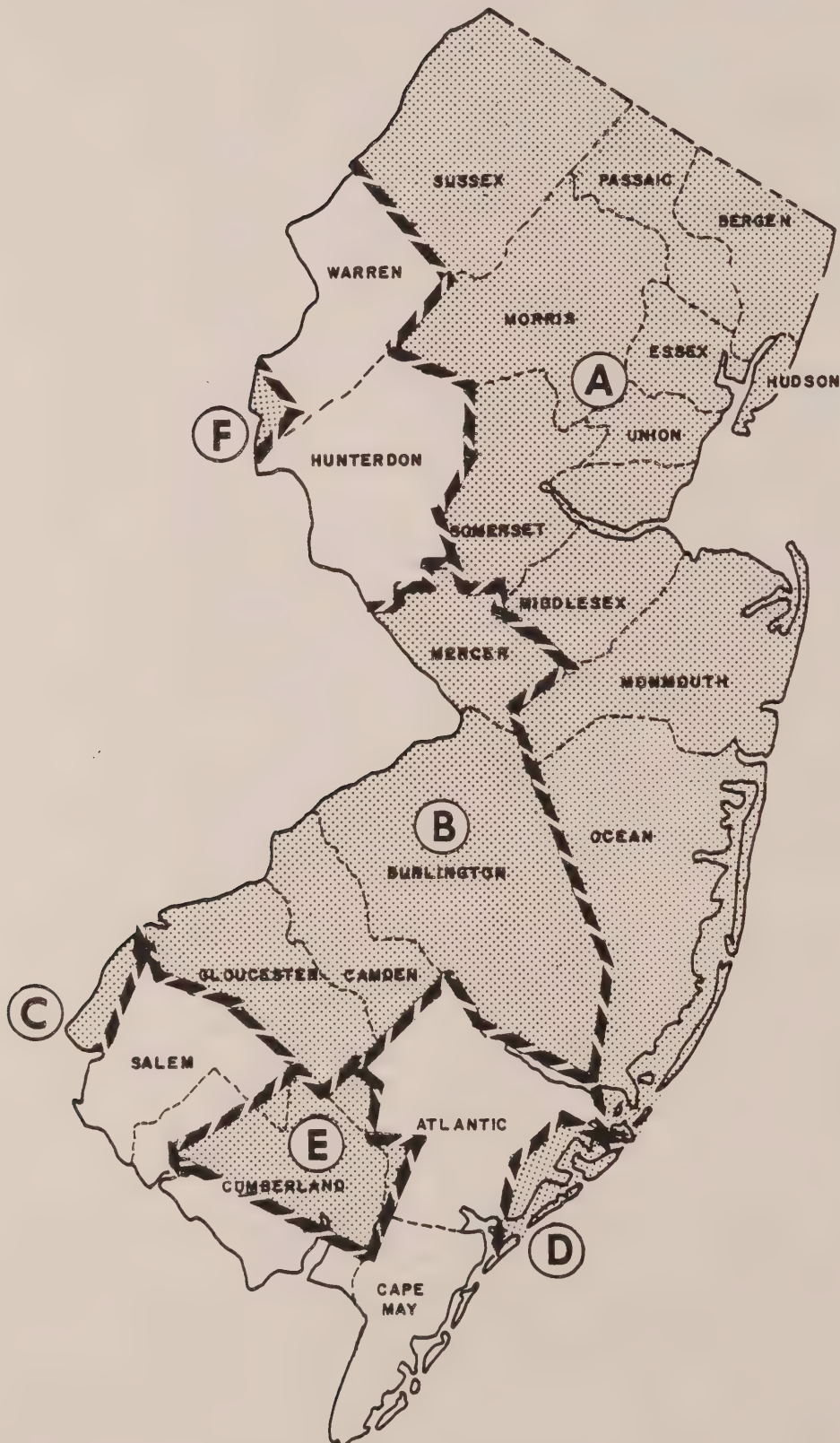
New Jersey contains 21 counties and 567 municipalities that are involved in the planning, construction and maintenance of transportation facilities and operation of transportation services and programs. Together, these local governing bodies have the responsibility for over 31,000 miles of roads and streets, and 12 public airports.

## **F. Private Sector**

The private sector continues to play an important role in the provision of public transit service in New Jersey. There are over four hundred private, non-subsidized bus companies in the state, which collectively transport 220,000 travellers per day, or approximately one-third of the total daily bus transit ridership in the state. The private sector also plays an important role in the financing and construction of improvements to public roads to permit the development of adjoining properties.



**FIGURE 1**  
**NEW JERSEY URBAN AREA**  
**PLANNING STUDY AGENCIES**



- A.** North Jersey Transportation Coordinating Council  
NJTCC
- B.** Delaware Valley Regional Planning Commission -  
DVRPC
- C.** Wilmington Metropolitan Area Planning Coordinating Council  
(Salem County Urban Area Transportation Study) -  
WILMAPCO
- D.** Atlantic City Urban Area Transportation Study Council - ACUATC
- E.** Cumberland County Urban Area Transportation Study -  
CCUATS
- F.** Phillipsburg Urban Area Transportation Study -  
PUATS

### III. THE TRANSPORTATION PROJECT DEVELOPMENT PROCESS

Prior to the early 1960's, transportation planning was little more than "needs" studies, where needs were defined by identifying highway segments which did not conform to established design standards. With few exceptions, these studies did not account for social, economic and environmental impacts of highway construction, financial restraints on transportation improvements, or the views of the affected communities.

With the passage of time, however, the significance of such non-transportation issues on transportation decision making became more and more apparent, prompting changes in the planning process to account for these issues.

Beginning with the Federal-aid Highway Act of 1962 and the Urban Mass Transportation Act of 1964, the transportation planning process has undergone a profound transformation over the past twenty some odd years, dictated in large part by federal legislative mandates mirroring changing public attitudes.

A brief history of this period, excerpted from materials prepared recently by the Federal Highway Administration (FHWA) Office of Planning and Policy Development, chronicles this transformation:

**1965 Housing and Urban Development Act**

- Authorized grants for comprehensive planning to regional organizations.

**1969 U.S. Office of Management and Budget Circular A-95**

- Encouraged establishment of project notification and review systems.
- Required areawide comprehensive planning agencies to comment on the relationship of proposed projects to the planned development of the area.
- Required that federal agencies notify Governors of grant and other funding awards within their state.

**1969 Policy and Procedure Memorandum 50-9 Issued**

- Comprehensive directive issued by FHWA which implemented 23 statutory mandates (i.e. U.S.C. 134) regarding urban transportation planning.

**1969 National Environmental Policy Act**

- Required the preparation of Environmental Impact Statements for major federal actions with potentially significant impacts on the environment.
- Required a systematic interdisciplinary approach to planning and decision making.
- Created Council on Environmental Quality to implement policy.

**1970 Federal-Aid Highway Act**

- Required promulgation of guidelines (known as the "Process Guidelines") to assure that economic, social, and environmental effects are fully considered in highway projects.

**1973 Federal-Aid Highway Act**

- Redefined federal/state relationship by codifying in Title 23 the intent of a federally assisted, state-administered program.
- Required a realignment of federal-aid primary, secondary, and urban systems based on their functional usage.
- Established set aside of federal-aid highway funding authorizations for metropolitan area planning.

#### **1975 FHWA-UMTA Joint Planning Regulations**

- Established procedural and content requirements of the urban transportation planning process.
- Designated metropolitan planning organizations (MPO) as forums of local decision-making on transportation matters.

#### **1976 Federal-Aid Highway Act**

- Directed Secretary of Transportation to conduct (in cooperation with state, county, city, and other local organizations) a study of the factors in planning, selecting, programming, and implementing federal-aid urban system routes.

#### **1977 Clean Air Act Amendments**

- Linked transportation and air quality planning.
- Required the development of State Implementation Plans (SIP) prescribing air pollution remedies, and required conformity of transportation plans, programs, and projects with the SIP.
- established sanctions if transportation related SIPs are not established.

#### **1978 Transportation Air Quality Planning Guidelines**

- Provided guidance on coordinated transportation and air quality planning in urban areas.
- Specified types of air quality evaluations to be incorporated into transportation planning activities.
- Required mass transit operator receiving financial assistance from USDOT to certify that special efforts are being made to provide transportation that handicapped persons can use.

#### **1983 The FHWA/UMTA Urban Transportation Planning Final Rule**

- Gave state and local officials more discretion in carrying out the planning process, including institutional relationships.
- Strengthened the tie between planning activities and programming decisions.

It is apparent from the foregoing discussion that transportation planning has been profoundly transformed over the past twenty years. The transformation extends well beyond planning, in that comparable changes have occurred throughout the transportation project development process. The present process is described at length in the Department's *Transportation Action Plan*, and is summarized in the next section.

### **A. Description of the Process**

There are four essential stages in the transportation development process:

- The *planning* stage, where foreseeable transportation problems are identified and ordered in terms of their relative importance, and prospective improvements are formulated.
- The *prioritization/programming* stage, where priorities are assigned to each project (i.e. improvement), and where projects are programmed for further action based on priority assignment and resource restraints.
- The *project development* stage, where projects are defined more precisely in terms of location and design (based on analysis of alternatives from social, economic and environmental (SEE) perspectives).
- The *implementation* stage, during which right of way is acquired (if necessary), engineering plans are finalized, and construction is undertaken.

These steps and the budgetary process within which they are undertaken are discussed in the balance of this section.



## **B. Planning**

Transportation problems and prospective improvements are identified by a continuing analysis process which includes on-going monitoring of the transportation system and its users, as well as those factors which are closely associated with transportation demand, such as growth and development.

As noted previously, the central tenets of the planning process—that it be comprehensive, cooperative and continuing (the "3C Process") originated with the Federal-Aid Highway Act of 1962 and the Urban Mass Transportation Act of 1964. What do these tenets really mean?

### **1. Comprehensive**

The process must seek to define the interrelationships between the state's socioeconomic characteristics and activity, its travel behavior and transportation system. After thorough analysis of present conditions and identification of transportation problems of regional and statewide significance, future needs are established. In establishing these needs, travel determinants (i.e. land use, population, employment, labor force, income, etc.) are considered as appropriate. Environmental and financial considerations also figure in the planning stage of the process.

### **2. Cooperative**

As described in Section "II: THE TRANSPORTATION PARTNERSHIP" there are many participants involved in planning transportation improvements in New Jersey; necessitating a constant flow of information among the various participants with regard to activities and decision-making.

To ease the flow of information among agencies, Presidential Executive Order #12372 required the states to develop review and notification systems for federally funded projects. These systems have replaced the previously mandated, but now abolished OMB Circular A-95 system. The system used in New Jersey is the State Review Process and is mandated under NJAC 5:38. To reduce conflicts in the plans of the many agencies, copies of reports are simultaneously disseminated to a state clearing house and appropriate state, areawide and county reviewing agencies. The New Jersey Department of Community Affairs (DCA) is presently the state clearing house, and in this capacity DCA gathers and disseminates information on all federally funded projects.

### **3. Continuing**

The planning "environment" changes continually, necessitating a continuing effort to maintain current data and an understanding of trends. To this end, NJDOT and other planning participants are routinely engaged in surveillance and evaluation activities.

The products of the planning process are the transportation plans of each participant (as necessary), and physical plant inventories maintained by NJDOT and

numerous local and other governmental entities for their respective facilities. The plans and inventories are subject to periodic updating to keep them current.

## **C. Prioritization/Programming**

Transportation projects are prioritized and programmed at established milestones throughout the development process. Prioritization ensures that available resources are devoted to projects that best implement the prevailing goals and objectives. Programming applies these resources to priority projects, accounting for schedules and restrictions on the use of specific sources of funds for specific purposes. Several programming documents are produced recurringly in accordance with Federal and State procedures.

### **1. Prioritization**

Project priorities on state facilities are established by NJDOT while county and local project priorities are established by municipal, county, and regional entities having jurisdiction. To the extent possible, initial priorities are based upon project assessments which summarize: the problem being addressed, the solution(s) being considered, the preliminary cost estimates, and the benefits expected from implementation.

Priorities for NJDOT projects are established by NJDOT's Resource and Priority (RAP) Committee. The Committee is comprised of senior managers of NJDOT and the Executive Director of NJ TRANSIT, and is chaired by the NJDOT Commissioner.

To establish priorities, projects are evaluated in terms of: engineering assessment, environmental constraints, community support and policy implications. These appraisals necessarily involve several organizational units on account of the various types of expertise required to undertake a comprehensive appraisal.

Project prioritization is done on an annual basis. The RAP Committee may at any time, however, see fit to amend previously established priorities in order to respond to changed conditions, subject to the approval of the funding agencies involved.

### **2. Programming**

The major programming documents include: the state's transportation element of the seven year Capital Budgeting and Planning Commission Report; Transportation Improvement Programs (TIP) for each of the six urbanized areas within (or partially within) the state; the Annual Federal-Aid Highway Program (the so-called, "105 Program"); and the NJDOT Annual Construction Program. Each is described further below.

#### **a. Seven-Year Capital Program**

This annual submission to the State Capital Commission on Budgeting and Planning is the first step in the preparation and legislative enactment of the annual state

budget. Submitted in the fall of each year, the first year of the seven year program is the state fiscal year beginning the following July. The Seven Year Capital Program serves as a statement of overall needs, providing an "early warning" of multi-year funding requirements. Beginning in 1985, the department is required to submit a revised capital program to the Legislative Transportation Committees each April.

While this report only accounts for state projects specifically, it generally includes an identification of the proposed and needed funding levels for Federally aided, county and local projects, and local aid (i.e. 100% state funded) projects.

#### **b. Transportation Improvement Program**

Each urbanized area within the state is mandated by federal statute to develop a Transportation Improvement Program (TIP). This document is intended to ensure that each metropolitan area transportation plan is implemented in an orderly, efficient manner by setting priorities for the use of federal funds. The TIP has two parts: a multi-year element covering at least three and not more than five years which describes the general aspects of the program, and the annual element which identifies the projects to be implemented during the first program year.

The TIP is really a composite document which includes projects developed by local governments and those of NJDOT and NJ TRANSIT. The project sponsors develop the basic priority and realistic estimates of total costs. The final product represents the comprehensive and coordinated statement of project priorities for the metropolitan area. The TIP is required to identify projects utilizing specific sources of federal-aid funding, and the inclusion of projects utilizing other sources of funding is encouraged for information purposes.

When adopted, each regional TIP is submitted to the Governor, FHWA, and UMTA.

#### **c. NJDOT Annual Construction Program**

The final step in the project programming process is the development of the Annual Construction Program. This program allocates state and federal capital funds to specific projects. The Annual Construction Program must be approved by the Commissioner of Transportation and the Governor. Subsequent to the approval of the construction program, NJDOT submits to the FHWA Division Administrator a list of projects (the "105" Program) for which federal funds will be sought during the coming year.

### **D. Budgeting**

From a transportation perspective, budgeting is the process whereby public funds are allocated to the state's various transportation programs. Although this section will primarily focus on the state's budgeting process, it is necessary to briefly discuss the flow of federal dollars because of their significant impact on shaping the state's transportation program.

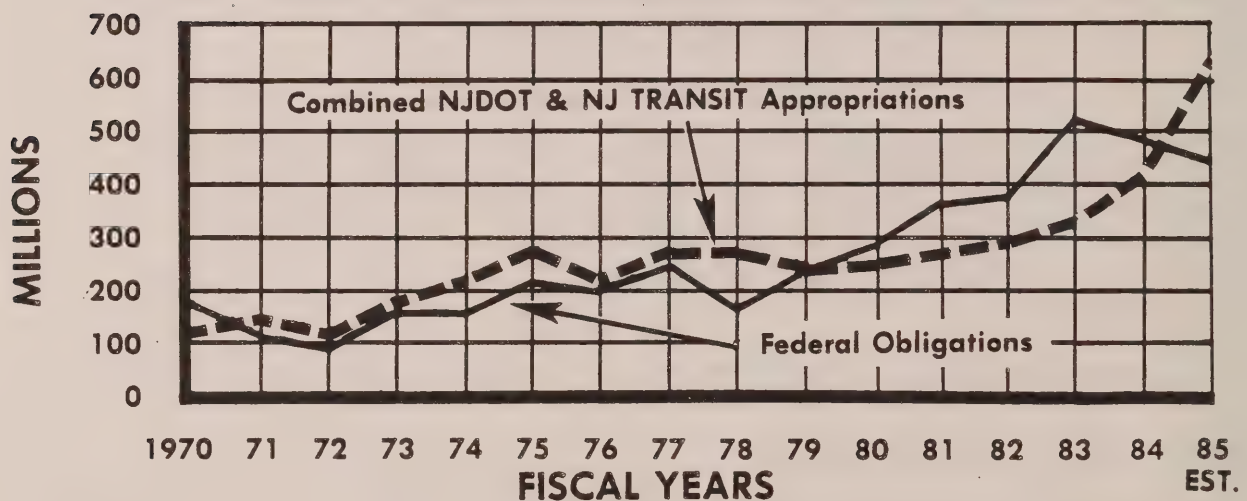


## 1. Federal funds

Federal funds represent a major source of funding for transportation programs in the state, as evidenced by Figure 2.

Preparation of the budget at the federal level begins with the Office of Management and Budget (OMB) requesting estimates of needs from all executive agencies. This request is for needs to maintain ongoing and new programs for a particular fiscal year and occurs some 15-19 months before the fiscal year begins. After a lengthy internal review process, OMB assembles all agency requests into a single budget document which becomes the President's budget message. The budget message is submitted to the president shortly after the first of the calendar year.

**FIGURE 2**  
**COMPARISON OF FEDERAL AND**  
**NON-FEDERAL TRANSPORTATION FUNDING**



Following this, the budget process enters the *authorization* stage which involves the determination of maximum spending levels for each program approved by the legislative branch. This process is the responsibility of standing committees in either the Senate or the House. The committees make recommendations to the full chambers for the agencies under their respective jurisdictions. After chamber approval, a bill is normally considered by a conference committee, which resolves differences in amounts authorized by each chamber. The authorization bills are forwarded to the chief executive for approval. Legislative authorizations not only set the maximum level of funding but can also include specific language on how the money should be spent.

There are two basic forms of authorization – Budget Authority, which authorizes funds for most federal programs including UMTA programs, and Contract Authority, from which most

programs within the Federal-aid highway program originate. Budget authority includes a two-step process, that of the authorization itself or the setting of the upper limit on the program, and another piece of legislation, the appropriations act.

The *appropriation* stage is one of the most critical to the budgetary process. Appropriations grant the money to spend or the power to incur financial obligations. The appropriations committees in the two houses play the major roles in this phase of the budgetary process.

Contract authority allows a by-pass of this two-step authorization-appropriation process to commit or obligate Federal funds for FHWA programs. Through this process, sums authorized in the Federal-aid highway acts are available for obligation without an appropriation action. (An obligation is a commitment of the Federal government to pay, through reimbursement to the states, the Federal share of a project's eligible cost.) The use of contract authority gives the States advance notice of the size of the Federal-aid program when the authorization act is enacted and thus eliminates the uncertainty contained in the authorization-appropriation sequence.

One additional step is taken insofar as Federal highway funds are concerned namely *apportionment*, wherein the flow of funds to the states is regulated based on specific formula criteria. The apportionments come to the states for specific transportation programs, e.g., Interstate system, 4R program, etc. and, in most instances, the states are given several years to spend the money.

## **2. The State Budgetary Process**

The New Jersey Constitution requires that appropriations be made by law before any money can be drawn from the State Treasury. Generally, monies for the support of state government and state purposes must be provided for in one general appropriations law covering one and the same fiscal year. However, with regard to transportation, bond funds, after being authorized by the legislature and approved by the voters in public referendum, are appropriated by means of separate specific acts of the Legislature which do not necessarily relate to the activities of a particular fiscal year. The Constitution prohibits the Legislature from making appropriations in any fiscal year in excess of the total amount of the revenue on hand and anticipated as certified by the Governor.

Each department, board, commission, and agency of the state must file by October 1 a request for an appropriation with the Director, Division of Budgeting and Accounting. The Director then examines each request and determines the necessity of the request. After review and examination, the Director submits the request together with his findings, comments and recommendations to the Governor. It is then the responsibility of the Governor to examine and consider all requests and formulate his budget recommendations.

The Governor's budget is then transmitted as a budget message which is examined by the Joint Appropriations Committee of both houses of the Legislature. The

committee reviews all aspects of the budget and makes changes by majority vote. The budget, in the form of an appropriations act, must be approved by the Senate and Assembly, and must be approved and signed by the Governor on or before July 1.

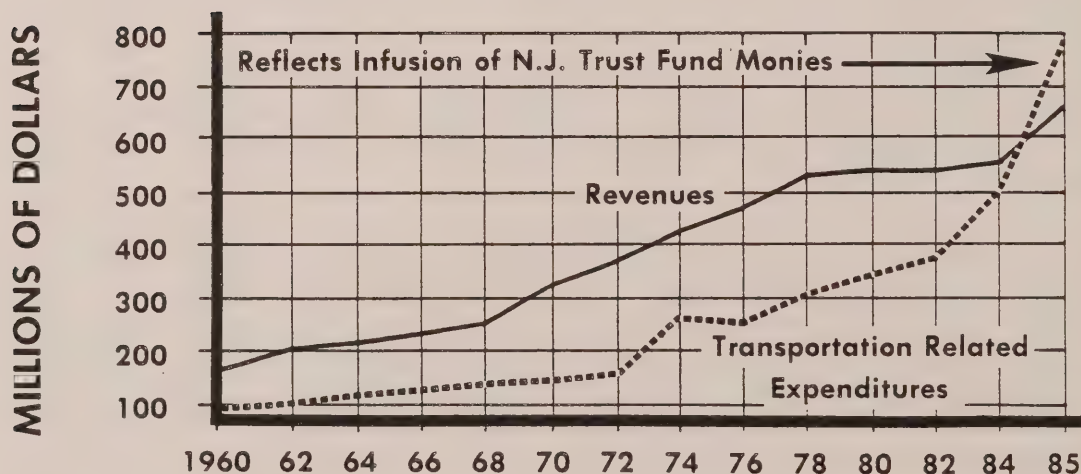
While the budget reflects both state and federal funds flowing into transportation programs, other resources are also used. Tolls collected by the various authorities are available to those authorities based upon approval of their respective boards.

### 3. Present Funding Situation

Transportation programs in New Jersey have been funded through general appropriations and general obligation bonds, and have had to compete for financial resources with all other state programs through the annual budgetary process or be subject to voter concurrence to issue general obligation bonds. In contrast to most states, where transportation revenues are dedicated to transportation purposes, expenditures for transportation in New Jersey until this year have been substantially lower than transportation revenues. (See Figure 3.) Consequently, New Jersey's once premier transportation system has fallen into a serious state of disrepair. However, several landmark developments occurred in 1983 and 1984 that bode well for transportation:

- On July 10, 1984, Governor Kean enacted the New Jersey Transportation Trust Fund into law. The Trust Fund represents the first successful, full fledged attempt to remedy the state's long standing transportation funding problem, providing over \$800 million annually in state and federal funds

**FIGURE 3**  
**TRANSPORTATION REVENUES VS.**  
**TRANSPORTATION EXPENDITURES**  
**IN NEW JERSEY**



Source: State of New Jersey Annual Budget



over the next four years, more than twice the level of funding ever appropriated for transportation improvements in the state. The New Jersey Transportation Trust Fund Act provides \$88 million/year of general fund revenues into a transportation trust fund account, coupled with \$30 million/year of increased truck fees and \$25 million of revenues from the state's toll authorities. The Trust Fund Authority will also issue debt through the sale of bonds to generate a total of \$249 million/year of state funds. When combined with available federal dollars, these funds yield an annual capital transportation program during the next four years of over \$800 million. \$2.3 billion of this total \$3.3 billion program is for highways, with the remaining \$1.0 billion for transit.

- Recognizing the special problems of the state's bridges, New Jersey voters in 1983 passed by referendum the New Jersey Bridge Rehabilitation and Improvement Act which, when combined with Federal funds, provides \$377.0 million for repair and improvement of bridges in the state.
- In 1983, Governor Kean and New York Governor Cuomo reached a historic agreement regarding New York-New Jersey Port Authority bridge and tunnel tolls, PATH fares, the future of the Port Authority owned World Trade Center, capital improvement needs of the Port Authority, and disposition of Port Authority surplus revenues for the two states. Under the terms of the agreement, each state will receive substantial amounts of money for transportation improvements. For New Jersey, the components of the Agreement mean:

- **Increase in Bridge and Tunnel Tolls** - This, plus other funds, will provide up to \$250 million for state infrastructure projects on a 55/45 basis, with New Jersey receiving the largest amount.
- **PATH Fare Increase** - A two-stage fare increase will provide the base of a \$556 million improvement program for the PATH System including improvements to all stations.
- **World Trade Center** - New York State would vacate 50 floors it currently rents in the World Trade Center that would initially provide \$400 million. These funds would go to finance infrastructure needs in both states.

Under the terms of the Agreement, a Bank for Regional Development would be created through bi-state legislation that would act as the vehicle for dispensing funds. Funds from the bank would be available for infrastructure projects throughout the bi-state port district.

Returning to the Transportation Trust Fund, in embracing the multi-year funding concept, the state legislature acknowledged the critical importance of a predictable, sustained, and substantially increased level of funding for transportation improvements, to remedy the problems caused by years of inadequate funding. The passage of companion legislation set the stage for a voter referendum in November 1984, (which was approved), to consider a constitutional amendment permitting the dedication of 2 1/2 cents of the existing fuel tax revenues for transportation improvements. These revenues will constitute one of the sources of state funds for the Trust Fund, and will insure continued state funding for transportation over the longer term.

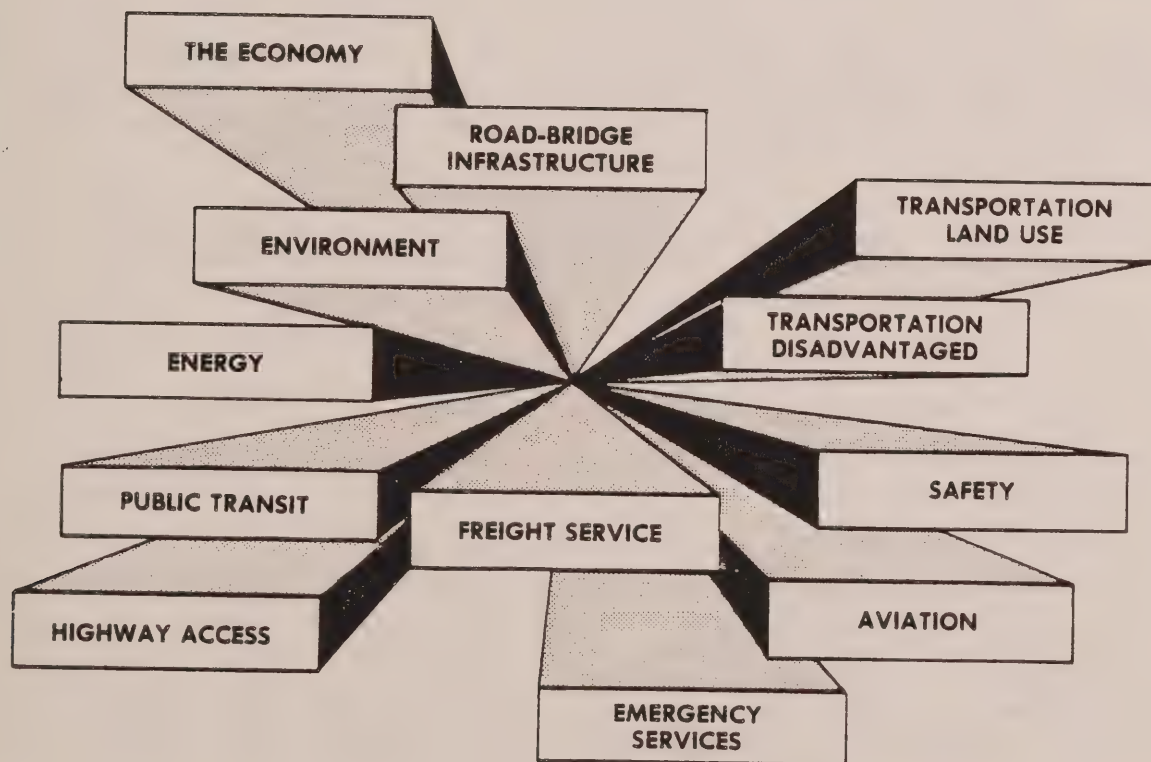


## IV. GUIDELINES FOR DEFINING THE PLAN

### A. Major Issues Affecting Transportation

The task of preparing a statewide transportation plan requires a clear understanding of the key issues confronting the state and affecting its transportation needs, now and in the foreseeable future. With such an understanding, strategic questions about the choices available to us and the consequences of pursuing one course of action versus another, can be intelligently posed; and by posing these questions, we are better able to define the goals and objectives we wish to pursue.

In this section, the key issues affecting the state's transportation needs are described, and the goals and objectives shaping the plan are defined. The concluding part of this section defines what the Department refers to as the program policy statements, which translate the goals and objectives into more definitive actions the Department believes are necessary to achieve the goals and objectives.





## 1. The Economic Situation

New Jersey's economy has apparently weathered well the effects of the economic recession of the past few years. The state's economy remains strong, but the nature of its economy is being transformed in a way that has significant transportation repercussions.

Overall, the state has undergone a long-term shift from goods-producing activities to service-providing activities. The forces giving rise to this have been well publicized: a manufacturing exodus to the west and sunbelt states where cheaper labor could be found; functional obsolescence of the state's manufacturing physical plant; the state's aging infrastructure, etc. New Jersey's attractiveness to service providing activities is attributable to several factors, including its relatively low taxes and utility costs, the proximity of Northern New Jersey to a rejuvenated Manhattan, etc.

During the past 30+ years, New Jersey has seen its percent of manufacturing jobs to total jobs decrease from 46% to approximately 23%. (See Table 1.) For the most part, the replacement industries are locating in the suburban and rural areas of the state, not the older, urban cities. Service industries are desirous of campus-like office park complexes in less developed sections of the state that are still in relatively close proximity to New York City and Philadelphia.

New Jersey's new growth areas are situated where they are in large part because of the development of the Interstate highway system, as evidenced by the fact that the I-80, I-287, and I-78 corridors represent some of the fastest growing corridors in the

**TABLE 1**  
**NEW JERSEY'S EMPLOYMENT COMPOSITION**

Employment Categories	1950	1960	1970	1980	1983
Manufacturing	46%	40%	33%	26%	23%
Construction and Mining	5%	5%	5%	4%	4%
Transportation and Utilities	8%	7%	7%	6%	6%
Wholesale and Retail Trade	17%	19%	21%	22%	23%
Finance, Insurance and Real Estate	4%	4%	4%	5%	5%
Services	10%	13%	16%	20%	22%
Government	10%	12%	14%	17%	17%
	100%	100%	100%	100%	100%

Source: *New Jersey Economic Indicators* No. 236, March 9, 1984

state. Certain prominent exceptions exist, notably: the Route 1 Corridor between Trenton and New Brunswick, where industries are attracted by Princeton University and the "Princeton mailing address"; the Hudson River Waterfront because of its proximity to Manhattan, land availability, competitive rental and utility rates, etc. and the Atlantic City area as a result of the legalization of the gaming industry.

All in all, New Jersey can expect to see continued economic growth in the future for several reasons. First, because of its location in the center of the Boston-Washington megalopolis, it remains attractive to corporations for both management and production functions. Second, the state has a highly productive, trained labor force which includes the highest number of scientists and engineers per capita of any state in the nation, and third because of state government's aggressive promotion of economic development within the state.

The foregoing changes can be expected to place continuing demands on the state and those local government entities benefitting from new development to provide new and expanded public facilities, including highways and mass transit services. With a growing transportation physical plant to construct and maintain, financial demands will grow accordingly.

There is no doubt that a well maintained transportation physical plant, or "infrastructure" as the physical plant has come to be called, is a key to economic development. The evidence is overwhelming and the experts have rendered their opinions. Consider:

- National surveys conducted by the Institute of Public Administration and the U.S. Economic Development Administration indicate that public infrastructure adequacy ranks ahead of both local tax incentives and industrial revenue bond financing in corporate location decision-making.
- The Regional Plan Association, in their regional infrastructure report, concluded that the renewal of basic infrastructure systems within the region generated the greatest multiplier effects when comparing numerous economic development strategies.
- In testimony to the Joint Economic committee during February 1984, representatives of the National Infrastructure Advisory Committee highlighted the need for infrastructure investments nationally, and concern about the nation's economic prognosis without it, by noting the relationship between public infrastructure and private investment and the adverse effects of a continuing decline in our infrastructure systems.
- An examination of development prospects within the Northeast Corridor by the Policy Research Center of the Coalition of Northeast Governors concluded that public infrastructure investments and private sector investment in a modern and efficient rail system can produce major economic development dividends for cities along the Northeast Corridor.
- In New Jersey, the Governor's Management Improvement Plan concluded: "Transportation has a direct and substantial impact on the economy of the state. One of New Jersey's major economic advantages of the past was and has been its extensive transportation system. In order for the state to remain in a competitive position, it is not only necessary to maintain and rehabilitate its existing highway system, it must also complete the planned interstate and non-interstate system expansion. These include capacity improvements...and the completion of existing "gaps".

## 2. State of Existing Road and Bridge Infrastructure

New Jersey's road system is extensive and represents a massive public investment by the citizens of the state. Over the years, the system has grown significantly; today it amounts to over 2,200 miles of state roads (see Figure 4) and over 31,000 miles of county, municipal, and other roads (See Figure 5 for growth in total system). An integral part of this roadway system is the 6,000 bridges which are located throughout the state, of which almost 2,200 are under state jurisdiction. The replacement cost of this road system is estimated to be more than \$20 billion.

The usage of New Jersey's road system has grown steadily; it is now the most intensely utilized system in the nation. As indicated in Table 2, the density of daily highway travel in the state is significantly higher than other states and approximately four times the national average. This is no doubt caused by the fact that New Jersey has the highest population density of any state in the nation as well as the fact that New Jersey also lies within the heavily travelled northeast corridor.

Recent studies conducted by NJDOT indicate that not only has New Jersey's once premier highway system deteriorated, but it has deteriorated at such an alarming rate as to be termed the single most serious problem facing New Jersey's transportation system. The present road and bridge renewal backlog presently stands at \$1.5 billion.

There is no doubt that the escalating deterioration of New Jersey's highway system is directly related to past trends of funding transportation in the state. As indicated in Figure 6, transportation expenditures in New Jersey until 1980 as a percentage of the total state budget continually declined. Measured in "real dollars" (i.e., net of inflation), annual transportation expenditures also declined during this period, despite the fact that the size of the state's highway infrastructure and total travel demand grew significantly during this same period. This dichotomy is graphically portrayed in Figure 7.

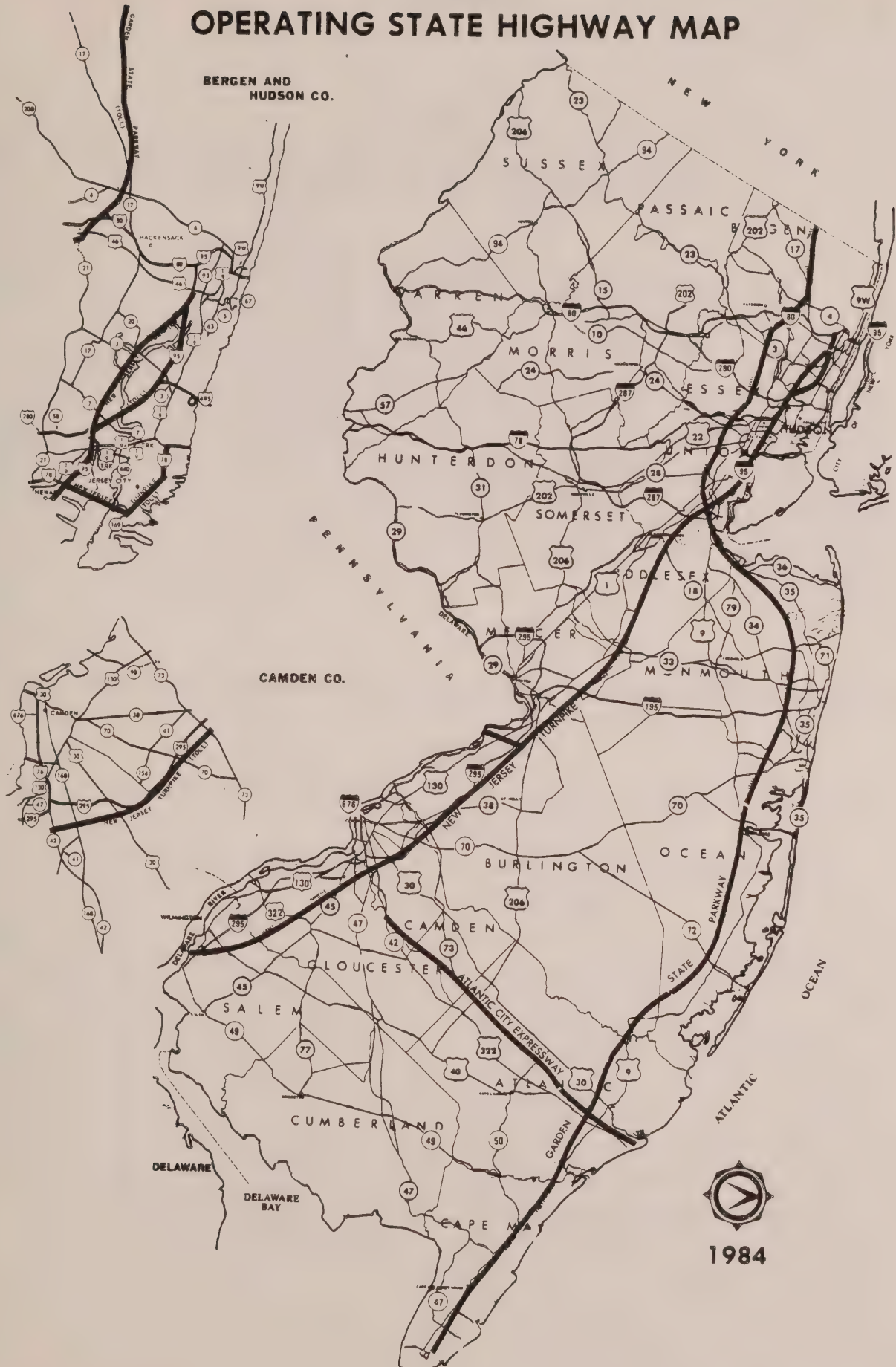
The deterioration of the state's roads and bridges have far reaching adverse effects, affecting the lives of virtually everyone in the state. Consider the following:

- It is more costly to operate and maintain motor vehicles on substandard roads (and bridges) than it is if acceptable standards are maintained.
- Accidents occur more often where hazardous road conditions and increased traffic congestion exist.
- Travel speeds during the peak hours have declined as a result of increased traffic congestion, bringing about increased gasoline consumption, air pollution and increased travel times.

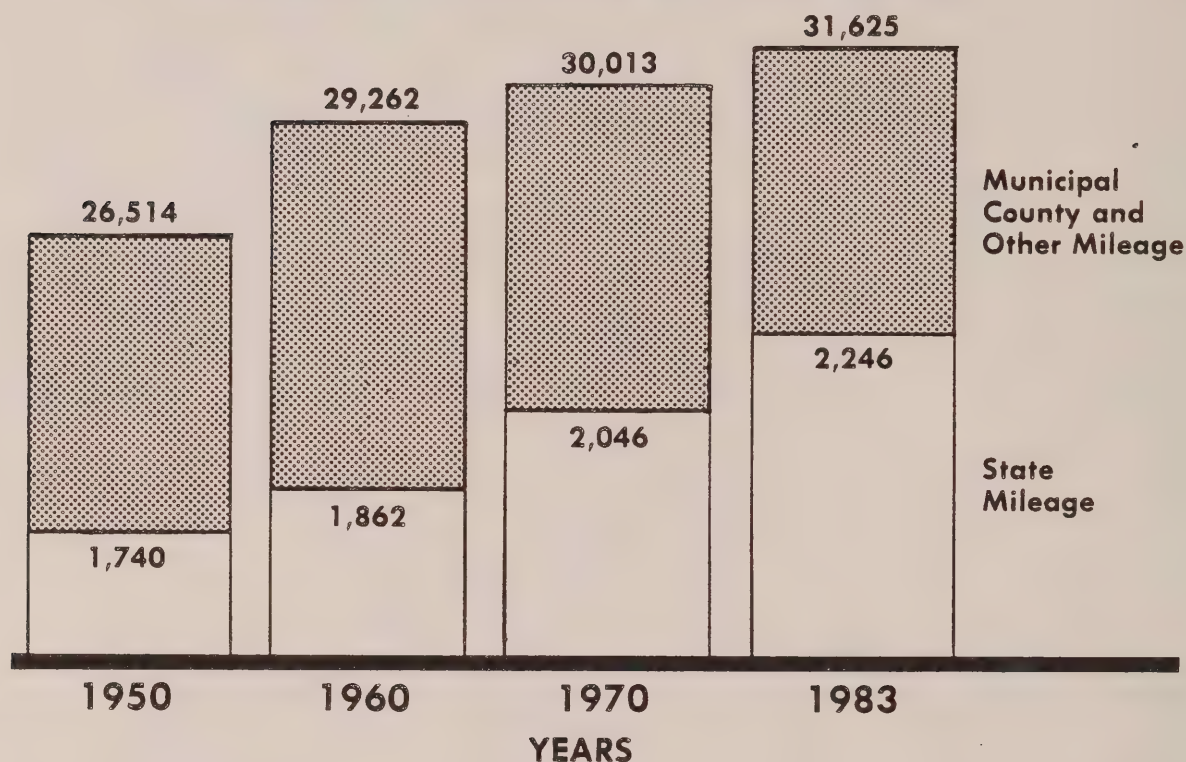
The foregoing discussion defined the highway and bridge problem in the aggregate; a comprehensive inventory of problems by problem type (or "category"), category definitions and the intended use of this inventory are discussed in Section VI, Longer Range and Continuing Needs.



## FIGURE 4 OPERATING STATE HIGHWAY MAP



**FIGURE 5**  
**ROADWAY MILEAGE IN NEW JERSEY**

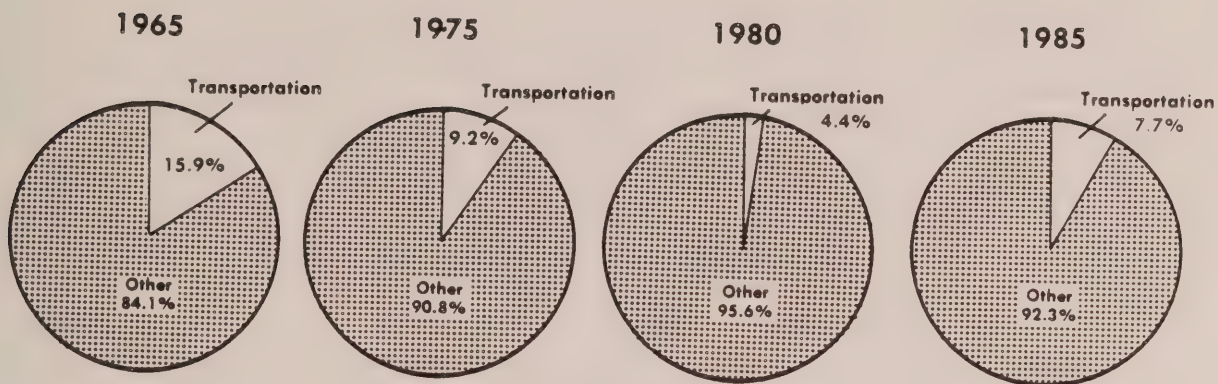


**TABLE 2**  
**COMPARISON OF HIGHWAY TRAVEL DENSITY**  
**SELECTED STATES**  
**1982**

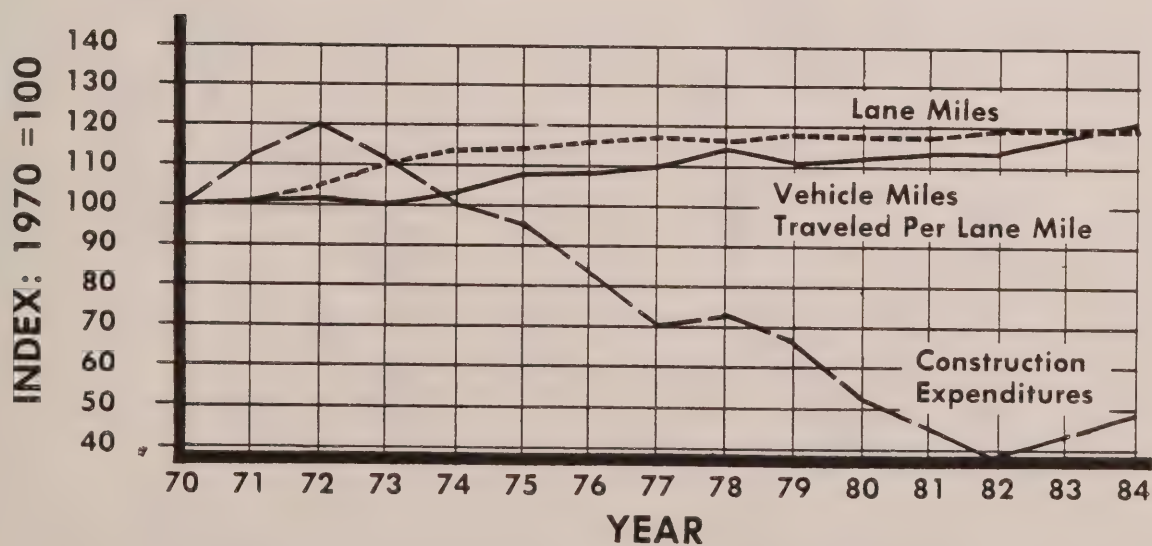
State	Center Line Miles	Total Daily Avg. Travel	Daily Travel Per Mile
Florida	93,797	217,800,000	2,300
Illinois	134,405	180,400,000	1,300
NEW JERSEY	33,692	141,900,000	4,200
New York	109,825	220,500,000	2,000
Pennsylvania	115,964	195,400,000	1,700
South Carolina	63,015	66,400,000	1,100
United States	3,866,296	4,363,000,000	1,100

*Note - For remaining states refer to: Highway Statistics, 1982 Tables VM.2. Pg. 169:  
HM-10 Pg. 113*

**FIGURE 6**  
**PERCENTAGE OF TOTAL STATE APPROPRIATIONS**  
**DEVOTED TO TRANSPORTATION**



**FIGURE 7**  
**HIGHWAY DEMAND VS. EXPENDITURES**





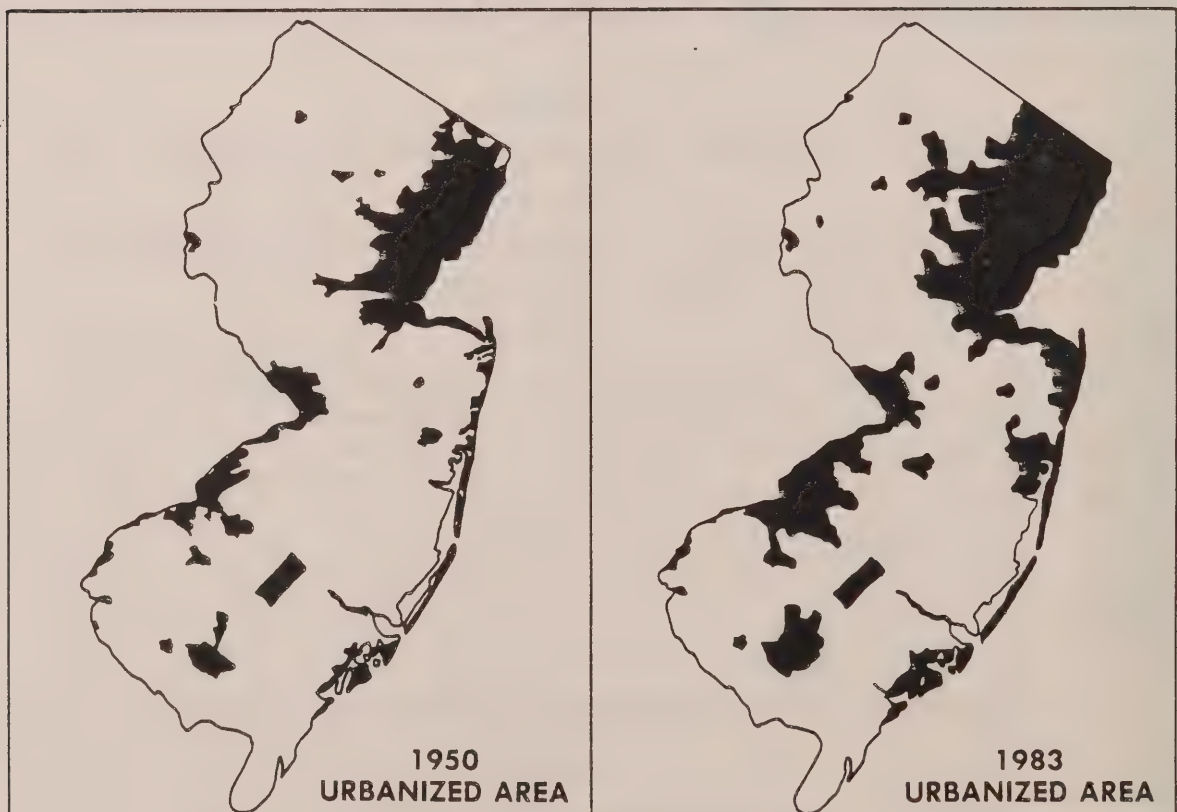
### 3. Transportation and Land Use

Although New Jersey is the most densely populated state in the nation, with an average density of 975 people per square mile, it is becoming more and more suburban in character.

Figure 8 compares the limits of urbanization as identified in the 1950 Census with the 1983 identifiable urban boundaries. The majority of this expansion is of the low density scattered development type, which has developed generally at the expense of the major urban centers. This pattern of scattered low density urban development has increased the dependence on the automobile. This is readily apparent in Table 3, where the modal choice of the state's tripmakers in 1960, 1970 and 1980 are summarized. The declining share of tripmaking by bus and rail by New Jersey residents at large occurred notwithstanding the fact that bus and rail use into Manhattan and Philadelphia did not change appreciably during this period. The foregoing trends pose a number of transportation dilemmas:

- Continued suburbanization patterns will require continuing investment in new transportation infrastructure which, absent real increases in funding, will increase competition between urban and suburban areas and between new infrastructure and existing infrastructure for limited dollars.

**FIGURE 8**  
**COMPARISON OF 1950 & 1983 URBANIZED AREA DELIMITATIONS**



- Demands for public transit services in newly developing areas will be difficult to satisfy economically, since these areas are developing in a manner not conducive to public transit use.
- As a petroleum importing state, the growing reliance on automobile transportation could place New Jersey at an economic disadvantage when compared to petroleum producing states.

**TABLE 3**  
**JOURNEY-TO-WORK TRIPS**  
**By Mode (Percent)**

**FOR ALL NEW JERSEY ORIGINATING TRIPS**

<b>Mode</b>	<b>1960</b>	<b>1970</b>	<b>1980</b>
Auto	64.4%	74.1%	82.7%
Bus	15.7%	10.5%	6.1%
Rail	4.2%	3.6%	3.0%
Other	15.7%	11.8%	8.2%
Total	100.0%	100.0%	100.0%

**TO MANHATTAN FROM NEW JERSEY**

<b>Mode</b>	<b>1970</b>	<b>1980</b>
Auto	23.3%	30.3%
Public Transit	75.8%	69.1%
Other	0.9%	0.6%
Total	100.0%	100.0%

**TRIPS TO PHILADELPHIA FROM NEW JERSEY**

<b>Mode</b>	<b>1970</b>	<b>1980</b>
Auto	69.8%	71.3%
Public Transit	23.4%	27.1%
Other	6.8%	1.6%
Total	100.0%	100.0%

*Note: Trips with New Jersey origins only*  
*Source: U.S. Census; NJDOT*

Major transportation investments will influence the nature and shape of future growth in the state through the patterns and types of land-use which they foster, e.g., low-density sprawl or more compact land use arrangements. Therefore, transportation investments can be used to help bring about specific development patterns, and/or development in specific locations.

Currently, there is significant public support for rationalized development patterns. A number of laws, regulations, and activities have been promulgated at national and state levels of government to provide some guidance and control over land use patterns, including the Coastal Area Facilities Review Act (CAFRA), Pinelands, Wetlands, the Mount Laurel II Court decision and the State Development Guide Plan drafted by the New Jersey Department of Community Affairs.

#### **4. Environmental Concerns**

##### **a. Air Quality**

It is well established that motor vehicles contribute substantially to air pollution in New Jersey's urbanized areas. Indeed, the automobile accounts for 90% of carbon monoxide (CO) emissions and for 50% of the non-methane hydrocarbons found in the state's air.

Carefully formulated, comprehensive transportation-air quality planning at all levels of government, together with the well-managed execution of resultant plans, will contribute to improved air quality. Such plans have been prepared in accordance with the Federally mandated Clean Air Act, and prescribe traffic improvements to relieve bottlenecks, increased ridesharing, continued emissions testing efforts as part of vehicle inspections, increased reliance on mass transit, and fringe park-ride lots.

Since the early 1970's, New Jersey's overall air quality has shown steady improvement. The state is substantially in compliance with the National Ambient Air Quality Standards prescribed by the Clean Air Act for four pollutants: particulate matter, sulfur oxides, nitrogen dioxide and carbon monoxide. Not as much progress has been made in controlling ozone, however.

The Federal Clean Air Act called for attainment of air quality standards as expeditiously as possible, but not later than December 31, 1982. However, in the case of carbon monoxide and ozone, the law permitted the Federal Environmental Protection Agency (EPA) to grant an extension of the deadline to December 31, 1987. Based on available evidence at the time and despite plans to implement all reasonably available control measures, New Jersey determined that it could not fully attain standards for these two pollutants by 1982. The state accordingly requested an extension of the attainment deadline for carbon monoxide and ozone to December 31, 1987, and this request was approved by the EPA.



## **b. Environmentally Sensitive Lands**

The state has a number of environmentally sensitive areas, and legislation to protect these areas has been enacted. Descriptions of the most prominent protective efforts and sensitive areas follow. Transportation in and through these areas must give special attention to their unique characteristics and needs.

Growing public awareness of the adverse impacts of "over-development" of the state's coastal areas prompted the passage of the *Coastal Area Facilities Review Act* of 1973, which authorized the state to prepare a plan for coastal management and to regulate all proposed industrial uses and large scale residential developments (See Figure 9). The purpose is to guide growth, avoiding adverse environmental impacts in an area having one of the most fragile and important ecological systems in the state.

Not all environmentally sensitive areas have been designated for absolute preservation, however. The *Hackensack Meadowlands District* has been targeted for urban development, notwithstanding the fact that its location and land composition make it ecologically important to the northeastern metropolitan area. The Meadowlands District is comprised of almost 20,000 acres of largely undeveloped tidal salt meadows and marshes and extends through 14 northern New Jersey municipalities in Bergen and Hudson Counties (See Figure 10). To insure the preservation of the Meadowlands and to produce a viable developmental plan, the New Jersey Legislature in 1968 enacted a law creating the *Hackensack Meadowlands Development Commission*. Possessing independent administrative, financial and regulatory powers of broad scope, the Commission was charged with the responsibility for writing and implementing a master plan and corresponding zoning plan.

Two of the state's great natural areas, the *Pine Barrens* of southern New Jersey and the *Skylands* area of Passaic and Sussex Counties, also warrant special care and attention. The *Pinelands* area is a unique environmental system which is not duplicated anywhere in the United States. The *Skylands* is a rugged area which contains heavy forests and steep slopes. In addition to its recreation potential, the rivers, lakes and reservoirs in this area are the best source of water supply for major portions of the northeastern metropolitan area.

To protect the *Pine Barrens*, the New Jersey Legislature established in June 1979 the *Pinelands Commission*, charging it with the responsibility to prepare a comprehensive management plan for the area that preserves and maintains the essential character of the existing pinelands environment, protects and maintains the quality of surface and ground waters, promotes the continuation and expansion of agricultural and horticultural uses, discourages piecemeal and scattered development, and encourages appropriate patterns of compatible residential, commercial and industrial development.

## **c. Hazardous Wastes and Materials**

Many of New Jersey's environmental problems are outgrowths of its past history as a heavily industrialized state. There are hazardous and toxic waste dump sites

**FIGURE 9**  
**MAP OF COASTAL ZONE REGULATED UNDER**  
**COASTAL AREA FACILITIES REVIEW ACT**



**FIGURE 10**  
**HACKENSACK MEADOWLANDS DISTRICT**





scattered throughout the State, with concentrations in the urban areas of the northeast. With the assistance of Federal programs and financial support, the State is at the forefront of environmental clean-up. With regard to the transportation of hazardous wastes and materials, NJDOT, as mandated by State legislation, is in the process of promulgating new regulations with regard to the transportation of such materials.

## **5. Transportation and Energy**

The continuing suburbanization of New Jersey and associated transportation impacts were described previously. This development pattern has energy consequences too, as scattered low density urban development is relatively inefficient from the point of view of transportation energy consumption. Although the energy problems of the mid to late 1970's, stemming from the OPEC oil embargo are seemingly over, the nation's vulnerability because of its foreign oil dependency has been clearly demonstrated. Moreover, the nation's oil imports are a substantial contributor to the "balance of payments" problem.

The primary source of energy consumed in the United States comes from petroleum, which accounts for about 43 percent of the total energy base (58 percent in New Jersey). Approximately 32 percent of all petroleum consumed is imported from foreign countries. The transportation sector accounts for about 27 percent of the nationwide gross energy consumption and 63 percent of the nationwide petroleum consumption.

The private automobile is the greatest user of petroleum in the transportation sector, accounting for approximately 63 percent of the total petroleum consumption attributable to transportation. As indicated in Table 4, the single occupant auto is among the most inefficient of available transportation modes. This, coupled with the fact that the automobile accounts for such a substantial share of total tripmaking, means that the automobile must be the target of transportation petroleum consumption reduction efforts. Continued improvements in automobile fuel efficiency mandated by Federal law and sought by consumers is the single most promising prospect for reduced consumption, and lesser reductions can be expected as a result of modest increases in transit ridership (as a result of modernization efforts now in progress as described later in the plan) and modest increases in carpooling and vanpooling resulting from normal, "market" forces.

## **6. Continuing Mobility Problems of the Transportation Disadvantaged**

A number of the state's residents have transportation difficulties, including the elderly, physically disabled, the urban and rural poor, and the young. In 1980, there were over 2.7 million persons in New Jersey 65 years of age or over and under 17 years of age (the legal age for a drivers license). Moreover, changes in the State's age profile indicate that by the year 2000 we can expect to see an increase in the number of state residents in these two age groups to nearly 3 million persons.

In 1980 there were also an estimated 400,000 handicapped persons, 5% of the State's total population, many of whom experienced significant mobility limitations. For

**TABLE 4**  
**DOMESTIC PASSENGER TRANSPORTATION**  
**ENERGY INTENSITY**  
**IN THE UNITED STATES 1981**

	Btu/PMT	PMT/Gal. Gasoline or Equivalent
Motorcycles	2,273	55
Passenger Cars	3,498	36
Personal Light Trucks	4,600	27
Buses		
Intercity Buses	1,078	129
Transit Buses	3,210	43
School Buses	818	153
Rail		
Intercity Rail	1,765	79
Transit Rail	3,015	42
Commuter Rail	2,913	43
Bicycles	71	1,750
Certified Air Carrier Aircraft	5,733	24
General Aviation Aircraft	11,044	12

*PMT = Passenger Miles of Travel*

*Sources: National Transportation Statistics, Annual Report, September 1983, USDOT;  
Transportation Energy Conservation Data Book: Edition 4, Oak Ridge National  
Laboratory, September 1980, U.S.D.O.E.;  
Motor Vehicle Facts & Figures '84, Motor Vehicle Manufacturers Association,  
1984.*

obvious reasons, poverty is also a mobility impediment and in 1980, nearly three quarters of a million persons or 9.5% of the State's population were below the poverty level.

The mobility problems of many of the state's citizens have some serious consequences. Employment opportunities in suburban and exurban locations are beyond the reach of many of the unemployed, who lack autos and reside for the most part in the state's urban areas. Likewise, many vocational and higher education institutions, recreational and cultural facilities and services are beyond the reach of persons lacking automobile access. Efforts to provide low and moderate-income housing in developing suburban areas, as called for by the New Jersey Supreme Court

in the landmark Mount Laurel zoning case, could if not carefully coordinated with the placement of employment opportunities create additional transportation difficulties, since typical suburban development patterns do not lend themselves to economical transit service.

## **7. Safety**

### **a. Trends To Date**

Over the past several years, there has been a growing awareness of safety issues by government and the general public. Transportation safety is an especially significant issue in New Jersey because of the State's high degree of urbanization and intense use of its highway system.

Highway congestion in New Jersey is increasing. Between 1970 and 1980, New Jersey's population increased by approximately 200,000, the number of registered autos grew by more than 1.0 million and annual vehicle miles of travel rose by approximately 24 percent. Moreover, the density of traffic on New Jersey's roads is nearly four times the national average.

A review of traffic accident statistics for New Jersey reveals mixed results. New Jersey fares well in relation to other states in terms of auto fatalities, ranking tied for third lowest nationally in terms of auto fatalities per 100 million vehicle miles of travel in 1982, the most recent year for which statistics are compiled. In terms of non-fatal injury accidents, New Jersey's experience is less laudable, ranking fourth highest nationally out of the 41 states reporting statistics. Comprehensive statistics may be found in Table 5.

As traffic continues to grow, and as larger and heavier trucks appear in greater numbers, the accident potential in the future, all other things being equal, will increase. The growing problems with drunken driving and the gradual increases in traffic speeds on relatively uncongested highways are other sources of safety concern.

### **b. Governmental Response To These Trends**

Safety concerns are a matter of heightened priority for USDOT, and were the subject of a speech given by the USDOT Secretary to the American Association of State Highway and Transportation Officials (AASHTO) in October, 1983. The Secretary announced a comprehensive set of highway safety initiatives at the Federal level, including:

- A campaign against drunk driving;
- Efforts to promote the use of safety belts and child safety seats in motor vehicles;
- Model procedures for training truck drivers;
- Improving the truck cargo tank safety standards;
- Improving the National Driver Register; and
- Full federal funding of special signs and highway marking to reduce nighttime driving hazards.



# TABLE 5 MOTOR VEHICLE TRAFFIC FATALITIES AND INJURIES

1982

HIGHWAY STATISTICS DIVISION  
OFFICE OF HIGHWAY PLANNING

TABLE F1-1  
SEPTEMBER 1983

STATE	VEHICLE MILES (MILLIONS)	FATAL ACCIDENTS		NONFATAL INJURY ACCIDENTS		FATALITIES		NONFATAL INJURED PERSONS	
		NUMBER	RATE 1/	NUMBER	RATE 1/	NUMBER	RATE 1/	NUMBER	RATE 1/
ALABAMA	28,516	744	2.61	22,585	79.20	839	2.94	32,404	113.63
ALASKA	3,702	96	2.59	(2/)	(4/)	105	2.84	(2/)	(4/)
ARIZONA	19,729	636	3.22	28,966	146.82	724	3.67	45,778	232.03
ARKANSAS	16,630	476	2.86	16,006	96.24	548	3.30	25,003	150.34
CALIFORNIA	169,999	4,122	2.42	184,972	109.81	4,618	2.72	274,072	161.22
COLORADO	23,786	397	2.51	26,493	111.38	667	2.80	38,928	163.66
CONNECTICUT	20,138	464	2.30	(2/)	(4/)	515	2.56	(2/)	(4/)
DELAWARE	4,391	119	2.80	4,742	103.28	122	2.66	7,189	156.57
DIST. OF COL.	3,380	35	1.04	9,127	269.99	36	1.06	13,519	399.91
FLORIDA	79,498	2,279	2.87	(2/)	(4/)	2,510	3.16	(2/)	(4/)
GEORGIA	48,731	1,097	2.25	40,645	83.41	1,229	2.52	60,504	124.16
HAWAII	6,048	144	2.38	8,512	140.73	159	2.63	12,070	199.55
IDAHO	7,857	212	2.70	7,107	90.45	295	3.25	11,006	140.07
ILLINOIS	65,835	1,476	2.24	104,689	159.02	1,632	2.51	156,263	237.35
INDIANA	39,203	840	2.14	41,994	107.12	955	2.44	61,285	156.32
IOWA	19,341	431	2.23	17,933	92.72	480	2.48	25,905	133.93
KANSAS	17,658	436	2.47	19,842	112.37	498	2.82	29,899	169.32
KENTUCKY	25,627	726	2.83	26,948	105.15	822	3.21	40,542	158.20
LOUISIANA	26,902	962	3.58	(2/)	(4/)	1,091	4.06	(2/)	(4/)
MAINE	7,649	151	1.97	9,686	126.62	168	2.20	14,053	183.71
MARYLAND	28,920	579	1.99	(2/)	(4/)	640	2.21	(2/)	(4/)
MASSACHUSETTS	36,666	612	1.67	34,511	94.12	655	1.79	46,718	127.41
MICHIGAN	61,200	1,281	2.09	87,384	142.78	1,417	2.32	130,061	212.52
MINNESOTA	29,176	508	1.74	24,559	84.17	571	1.96	35,850	122.87
MISSISSIPPI	17,146	617	3.60	(2/)	(4/)	730	4.26	(2/)	(4/)
MISSOURI	35,003	784	2.24	(2/)	(4/)	893	2.55	(2/)	(4/)
MONTANA	6,669	215	3.22	6,127	91.87	254	3.81	9,316	139.68
NEBRASKA	11,435	226	1.98	13,279	116.12	261	2.28	19,840	173.49
NEVADA	6,413	248	3.87	7,540	117.56	280	4.37	11,387	177.55
NEW HAMPSHIRE	6,971	154	2.21	(2/)	(4/)	173	2.48	(2/)	(4/)
NEW JERSEY	51,802	990	1.91	81,921	158.14	1,086	2.10	121,513	234.57
NEW MEXICO	11,850	489	4.13	14,864	125.43	577	4.87	23,253	196.22
NEW YORK	80,484	1,956	2.43	170,688	212.08	2,153	2.68	252,959	314.30
NORTH CAROLINA	43,100	1,169	2.71	53,091	123.18	1,306	3.03	83,863	194.58
NORTH DAKOTA	5,252	128	2.44	3,868	73.64	148	2.82	5,800	110.42
OHIO	71,751	1,447	2.02	97,993	136.57	1,607	2.24	153,686	214.19
OKLAHOMA	30,011	916	3.05	24,049	80.13	1,070	3.57	35,743	119.10
OREGON	19,384	464	2.39	21,299	109.88	518	2.67	34,620	178.60
PENNSYLVANIA	71,313	1,603	2.25	83,679	117.34	1,810	2.54	124,972	175.24
RHODE ISLAND	5,908	99	1.68	(2/)	(4/)	108	1.83	(2/)	(4/)
SOUTH CAROLINA	24,222	667	2.75	15,686	64.76	730	3.01	23,019	95.03
SOUTH DAKOTA	6,361	129	2.03	4,192	65.90	148	2.33	6,174	97.05
TENNESSEE	34,793	944	2.71	34,134	98.10	1,055	3.03	49,256	141.57
TEXAS	125,218	3,699	2.95	135,859	108.50	4,213	3.36	204,666	163.45
UTAH	10,925	263	2.41	11,524	105.48	296	2.71	17,691	161.92
VERMONT	3,993	92	2.30	(2/)	(4/)	107	2.68	(2/)	(4/)
VIRGINIA	41,430	781	1.89	40,388	97.48	879	2.12	59,288	143.10
WASHINGTON	31,258	671	2.15	36,990	118.34	748	2.39	50,840	162.64
WEST VIRGINIA	10,932	407	3.72	16,187	148.06	465	4.25	25,854	236.49
WISCONSIN	32,794	669	2.04	36,422	111.06	770	2.35	52,930	161.39
WYOMING	5,281	173	3.28	3,812	72.18	201	3.81	5,836	110.50
TOTAL 5/	1,592,481	39,015	2.45	1,630,293	119.50	43,862	2.75	2,433,456	178.37
U. S. TOTAL (EST.) 5/	1,592,481	39,015	2.45	1,960,000	130.08	43,862	2.75	2,928,000	183.86

1/ PER 100 MILLION VEHICLE-MILES OF TRAVEL.

2/ ESTIMATES OF FATAL ACCIDENTS AND FATALITIES ARE BASED ON FARS DATA.

3/ DATA NOT REPORTED BY STATE.

4/ RATE CAN NOT BE COMPUTED.

5/ THE TOTAL IS BASED ONLY ON THE DATA SHOWN IN THE TABLE. IT DOES NOT REPRESENT A NATIONAL TOTAL BECAUSE

OF MISSING DATA. THE TOTAL FATAL ACCIDENT AND FATALITY RATES ARE BASED ON THE TOTAL TRAVEL SHOWN ON THE TABLE. THE TOTAL NONFATAL INJURY ACCIDENT AND NONFATAL INJURY RATES ARE BASED ON A TOTAL TRAVEL OF 1,364,300 MILLION VEHICLE MILES FOR THE STATES REPORTING THIS DATA.

6/ ESTIMATES OF FATAL ACCIDENTS AND FATALITIES ARE BASED ON FARS DATA. ESTIMATES OF TRAVEL, INJURY ACCIDENTS AND INJURIES WERE MADE BY FHWA.

Source: Federal Highway Administration

The Secretary also announced plans to establish a separate National Traffic Safety Administration within the Department of Transportation. The proposed Agency would focus on motor vehicle safety and transportation safety in all of its important aspects. Finally, the Secretary announced that a Hazardous Materials Advisory Group was being established to assist in assuring safe transportation of hazardous cargo and to prepare for emergencies.

Safety concerns have also prompted a number of actions in New Jersey as described briefly below.

### **(1) Drinking Age**

In January 1983, New Jersey passed a law raising the drinking age from 19 to 21; by 1985 all persons must be 21 years of age before they can consume alcoholic beverages in the State. New Jersey has been one of the leading states in issuing drunk driving penalties and convictions. This has resulted in a reduction in drunk driving fatalities by 29% during the two-year period 1981-1983. Also, drunk pedestrian fatalities have been reduced by 18% during the same time period.

### **(2) Driver Restraints**

There is widespread agreement among the experts that mandatory seat belt laws are the quickest and least expensive means of saving lives in automobile accidents. Legislation mandating the use of seat belts was enacted into law in late 1984. It has been estimated that if 50% of the occupants of vehicles "buckle up", approximately 200 lives in New Jersey could be saved (there are some 1000 fatalities caused by vehicular accidents in New Jersey each year). Presently, approximately 12-14% of the nation's travelling public uses seat belts, while New Jersey's average is about 20%.

During April 1983, New Jersey's Baby Seat Law became effective, requiring children up to the age of 18 months to be secured in an approved infant seat; and children between 18 months and 5 years of age to be secured in an approved infant seat or in back seat safety belts.

### **(3) Longer and Wider Trucks**

The Surface Transportation Act of 1982 authorized the use of longer and wider commercial vehicles on a national system of primary highways designated by the USDOT Secretary. In subsequent negotiations with USDOT, the Department succeeded in limiting the designated system in New Jersey to the Interstate system and primary arterials having 12 foot or wider lanes. Operations of the larger dimensioned trucks off the designated system are tightly regulated by the Department through a permit process.

### **(4) Hazardous Materials**

In December, 1983, Governor Kean signed legislation designed to control the flow of hazardous materials in the state. Prior to this legislation, there was no official mandate in the state to regulate the intrastate movement of hazardous materials.

Essentially, the legislation requires the Department to adopt the federal hazardous materials regulations which are included in 49 Code of Federal Register (CFR) or similar regulations. At the present time, NJDOT is moving to adopt a substantial portion of the federal regulations. The same legislation designates the New Jersey State Police as the enforcement agency once the regulations are adopted, which is likely to occur by the end of 1984.

The regulations address packaging requirements, labeling and placarding requirements, and vehicle and driver requirements. The routing of hazardous materials will generally be over the safest and most expedient routes, and will utilize bypasses of densely populated areas to the extent possible.

#### **(5) 55 M.P.H. Speed Limit**

The Department, in cooperation with the New Jersey State Police and the New Jersey Division of Motor Vehicles, is engaged in an ongoing effort to monitor and enforce the federally mandated 55 mile per hour speed limit on the state's highway system. This effort has enabled New Jersey to continue to meet the Federally prescribed speed enforcement standards; violation of these standards could result in forfeiture of prescribed amounts of Federal Highway funds.

### **8. Public Transit Challenges**

Until the 1930's , public transportation was the predominant means of transportation. As automobile ownership grew and the highway system expanded, public transportation use leveled off and then began to decline. Although World War II provided a temporary reprieve for public transportation, the economic conditions and government policies following the war (e.g. plentiful supply of inexpensive gasoline; continued growth in auto ownership; continued Federally supported highway construction; Federal mortgage tax credit for home-owners, etc.) created financial hardships for the transit industry that prompted a vicious cycle of service cuts followed by patronage losses as transit operators sought, mostly unsuccessfully, to preserve their profit margins. By the 1960's, a wholesale transfer of public transit operations from private to public ownership had begun, with governmental subsidies to sustain operations.

In more recent years, the decline in public transit ridership has been halted, and modest increases are now in evidence, including in New Jersey. While it is apparent that public transit will never be the dominant mode of transportation it once was, it is also apparent that it will continue to play a significant role in transporting people in larger urban areas such as the New York City and Philadelphia metropolitan areas.

#### **a. Commuter Rail in New Jersey**

Commuter Rail in New Jersey traces its beginnings to the early 19th century, when the Camden and Amboy Railroad Transportation Company commenced the first scheduled service. The pattern described earlier of ridership growth and decline



ensued, and by 1959, rail patronage had reached an all time low, prompting the first rail abandonment. Sobered by this experience and the prospect of other impending cutbacks in rail service, the state entered into an agreement with all major commuter rail carriers to provide financial assistance that would ensure the continuation of essential passenger service in the state. Even with this support, passenger ridership, revenues and service continued to decline until the last carrier declared bankruptcy in 1970.

Thereafter, most commuter rail service in New Jersey was provided through contract with Conrail, the Federally legislated rail freight operator established in the wake of the Penn Central's bankruptcy. The exception was service on the Northeast Corridor Line, which was provided by Amtrak (as well as Conrail). On January 1, 1983, NJ TRANSIT took over the ownership and operation of all commuter rail service formerly provided contractually by Conrail. Presently NJ TRANSIT operates 450 scheduled trains over 380 route miles on 9 lines as depicted in Figure 11, and carries more than 130,000 trips daily.

#### **b. Bus Service in New Jersey**

Bus transit in New Jersey started in the early 1900's when the jitney or motor bus appeared in the urban regions of the state. Since that time, the bus system has grown to become the predominant carrier of public transit riders in the state, accounting for some 80 percent of total public transit ridership.

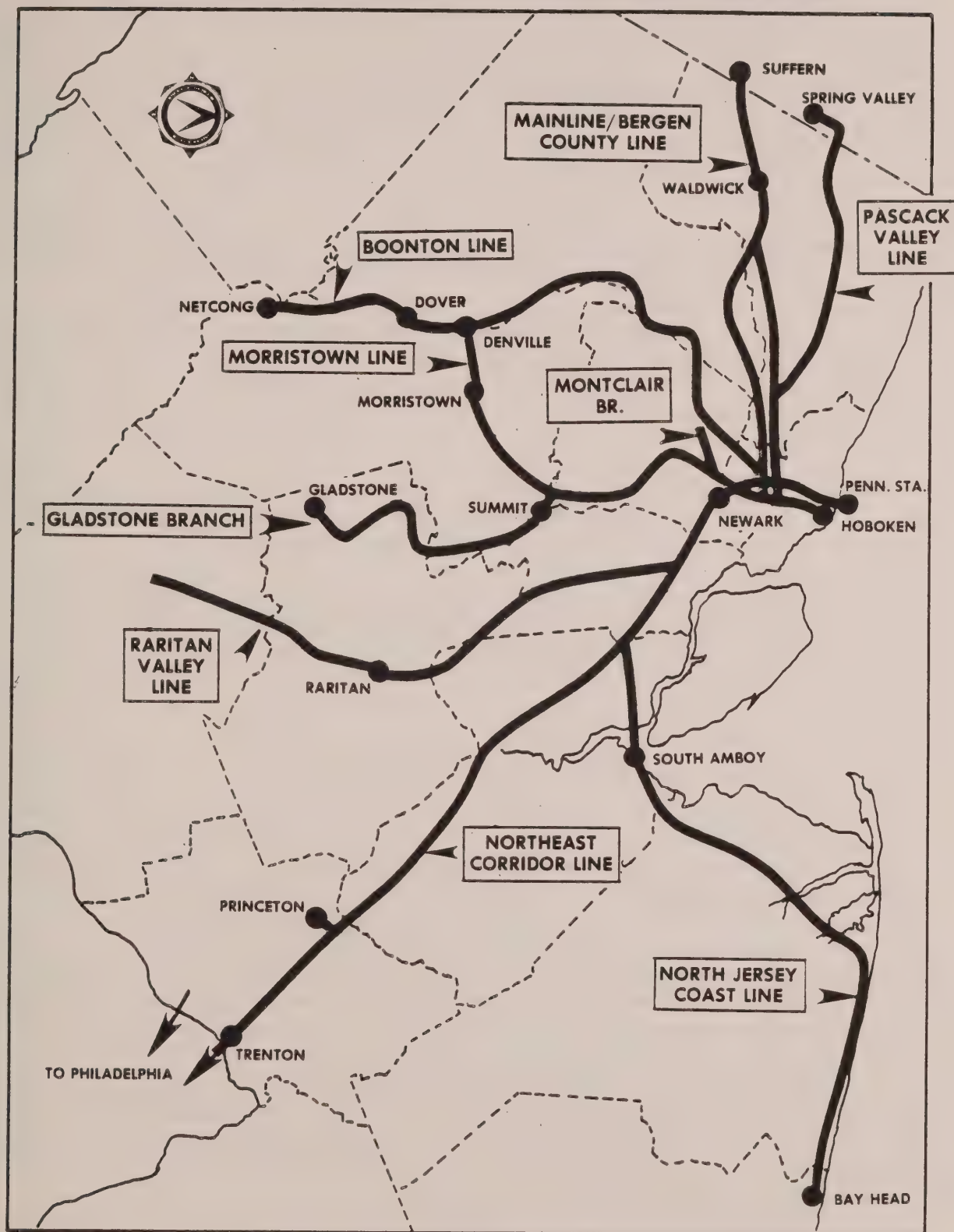
However, like its commuter rail counterpart, bus transportation in New Jersey has declined significantly since its peak years. Current bus ridership is only one-third of what it was immediately after World War II. Since 1970 alone, commuter and transit bus ridership has declined by about 41%.

As ridership decreased, bus operator profits became losses and financial assistance from outside sources became essential for many operators. In 1969, the state legislature approved a program of financial aid for essential bus services in imminent danger of financial collapse. What started out as an emergency short term subsidy program of \$0.5 million in 1969 has grown to a current program of approximately \$50.0 million.

The statewide transit bus network is comprised of nearly 475 companies which provide service on approximately 300 routes and 6000 buses. Each day over 670,000 trips are made by bus. NJ TRANSIT operates over 150 routes and carries approximately 450,000 trips daily (67% of the state's total bus transit ridership).

In addition to the transit system discussed above, New Jersey's casino industry in Atlantic City attracts more than 30,000 visitors on approximately 1,000 daily bus trips. A substantial amount of this bus service is provided by some thirty New Jersey domiciled bus companies operating approximately 90 routes.

FIGURE 11  
COMMUTER RAILROAD PASSENGER SERVICE



### **c. Transit System Modernization**

The transit system inherited by NJ TRANSIT in 1979 was in a serious state of disrepair. Rail and bus rolling stock were decrepit, and the fixed facilities (e.g., tracks, signals, and power systems on the railroad, and garages and maintenance facilities for both bus and railroad) were in immediate need of rehabilitation or renewal. The deplorable condition of the system was the end result of years of deferred maintenance by the prior, private owners, and little or no capital reinvestment.

NJ TRANSIT immediately launched major modernization plans, which are still in the process of being implemented. Several more years will be necessary to complete this effort, and during this transitional period NJ TRANSIT is striving to maintain the ridership base by improving service reliability and performance, maintaining a highly visible, public information and marketing effort to stay in touch with its riders and to insure that the riders know improvements are in store, and by progressing the improvements as quickly as possible.

### **d. Improving Performance**

Although NJ TRANSIT has made much progress in eliminating duplicative services it inherited and in better coordinating the public transportation system, system performance can be improved further. An important initial step which NJ TRANSIT has begun is the establishment of a comprehensive and uniform system for monitoring performance of its services, and routine data gathering to permit measurement, in light of a set of measurable goals and objectives now being formulated. The performance standards and indicators evolving from this process will also serve NJ TRANSIT well in determining where new service appears warranted.

### **e. Competition Between Public and Private Bus Carriers**

In creating NJ TRANSIT, the legislature directed that private sector owned and operated transit service be preserved wherever possible, and further directed NJ TRANSIT not to engage in destructive competition. Substantial progress has been made in defining operator "territories" to eliminate competition, but complaints about competition persist with respect to existing services and crop up occasionally with respect to newly proposed services. The deregulation of the interstate bus industry brought about by the Bus Regulatory Reform Act of 1982 has magnified this problem. While the legislative intent was to foster constructive competition among for-profit interstate carriers providing intercity services, the practical effect has been that interstate carriers have commenced services that compete destructively with existing commuter services, particularly services to and from Manhattan. Language which the State's congressional delegation succeeded in incorporating in the Bus Regulatory Reform Act to safeguard against this problem has been ineffective, because the Interstate Commerce Commission (ICC) has not vigorously applied the safeguards provided in ruling on new interstate service proposals.



There is a growing concern among transit operators that ridersharing in general, and vanpools in particular, are beginning to draw significantly from existing transit ridership, especially in corridors well served by public transportation. Of particular concern is the increasing number of privately formed, both for-profit and non-profit, vanpool operations. Commuters are drawn to vanpools because increases in transit fares have made the cost of a transit trip more expensive than prevailing vanpool costs in certain areas of the state.

The loss of transit riders to vanpools has eroded transit revenues and thus adversely affected transit's financial balance sheet. Transit fares have been stabilized of late, and efforts are being made to attract vanpoolers back to transit.

It has been argued that vanpools can benefit transit, by relieving transit operators of the necessity to provide services in areas where transit service is difficult to justify economically, or by permitting transit operators to curtail costly, peak hour services. However, if vanpools are established in transit corridors, vanpool use can have the effect of curtailing the frequency of existing transit service, thereby reducing the quality of service provided to those remaining on transit. In addition, in the case of fixed guideway facilities where frequency reductions are not as easily implemented, that loss in revenue cannot be made up by a reduction in operating costs.

## **9. Highway Access**

Highways whose primary function is to carry long distance traffic perform this function less well as access points (driveways) to abutting developments are added. Additional access points increase congestion, reduce traffic speeds and increase safety hazards.

From a *capacity* perspective, it is generally accepted that land access driveways reduce the capacity of a highway as a result of flow impedance. Frequent, entering and exiting traffic blocks the smooth flow of traffic in the right lane while excessive lane changing reduces the flow in the remaining lanes. From a *safety* perspective, national studies clearly demonstrate that the frequency of accidents on a highway increases as the frequency of driveway openings and intersections increase. Reductions in capacity and safety have associated costs as they require compensatory public expenditures to restore that capacity and safety. Reduced access control along a highway can also be a liability for adjoining property owners. As the public's perception of an unsafe highway (real or perceived) increases, they may look elsewhere for property acquisitions or doing business.

New Jersey has over 2,200 miles of state highways in its system. Each highway (or segment of highway) is classified by function depending upon the character of the service it provides, i.e., mobility, land access or some combination of the two. If each facility is to fulfill its designated role in the highway system, then the degree of access afforded to the highway must be commensurate with its designated role.

## 10. Freight Service Challenges

Rail freight presently accounts for a small share of total freight transportation movement in New Jersey (i.e., approximately 2% of intrastate tonnage, and 18% of total tonnage with virtually all of the rest carried by motor carrier). Rail freight formerly accounted for a far more substantial share but this steadily declined over the years as the highway system and the use of motor carriers grew, mirroring a national trend (see Table 6). Nonetheless, for selected commodities, rail continues to serve an important freight transportation function (e.g., petroleum products, chemicals, lumber, food products, paper products, coal, etc.).

The predominant rail freight carrier in New Jersey is the Consolidated Rail Corporation (CONRAIL), which provides freight service on approximately 88% of the existing rail freight network (total network in New Jersey consists of 1548 route miles of track). Nine other carriers also operate in New Jersey.

### a. Rail System Rationalization

Conrail was established by Federal legislation in 1976, in the wake of the bankruptcy of the Penn Central. The Federal legislation permitted freight operations of the bankrupt railroads to be sustained by CONRAIL (with a massive infusion of Federal funds to recapitalize the physical plant and offset deficits), and charged CONRAIL with the responsibility to develop a viable and profitable rail freight system that eventually, the Congress hoped, could be put back in private hands.

From its inception to the present, CONRAIL has been endeavoring to "rationalize" the system it inherited, and modernize that which is sensible to preserve for rail freight operations. As a result of CONRAIL's rationalization efforts, the active freight rail network in New Jersey has been reduced and further reductions are likely, as CONRAIL continues to eliminate unprofitable segments of the system.

The impacts of these rationalization decisions in New Jersey have been two-fold. First and most importantly, the elimination of specific rail branch lines has been disruptive to local commerce and industry. Typically, when rail freight service is abandoned, the rail dependent users are faced with one of three alternatives: going out of business; relocating on an active rail line; or continuing in business with alternative (usually truck) transportation. Where the use of alternate transportation modes entails added costs, some industries have reduced levels of operation, with corresponding reductions in employment. Closing of rail lines further impacts (negatively) prospects for plant expansions or new plant locations requiring rail freight services. The long term impact is that rail dependent commerce and industry is excluded permanently from selected areas of the State.

Second, the elimination of certain, so called, "through" routes compromises the prospects for future competition, as would be competitors would be obliged to use CONRAIL controlled trackage on terms favorable to CONRAIL. While this is clearly in CONRAIL's economic self-interest, it places the state and its industries in the difficult position of dealing with a rail carrier which, in many areas, is a monopoly.

**TABLE 6**  
**U.S.**  
**INTERCITY FREIGHT MOVEMENT BY MODE**  
**Ton Miles, Percent By Type of Transport**

Year	Motor Trucks (1)	Railways (2)	Inland Waterways (3)	Pipe Lines	Domestic Airways	Total
1982(est)	22.70	36.30	16.80	24.00	.22	100%
1981*	23.10	37.90	16.50	22.40	.21	100%
1980*	22.30	37.50	16.30	23.70	.19	100%
1979*	23.70	36.10	16.50	23.70	.17	100%
1978*	24.40	35.20	16.30	23.80	.27	100%
1977*	24.10	36.10	15.90	23.70	.18	100%
1976	23.20	36.30	16.90	23.40	.20	100%
1975	22.00	36.70	16.60	24.50	.18	100%
1974	22.40	38.50	16.00	22.90	.18	100%
1973	22.60	38.50	16.00	22.70	.18	100%
1972	22.70	37.70	16.40	23.00	.18	100%
1971	22.77	38.17	16.12	22.72	.18	100%
1970	21.30	39.72	16.49	22.29	.17	100%
1969	21.31	40.84	15.98	21.68	.16	100%
1968	21.55	41.16	15.85	21.28	.16	100%
1965	21.92	43.25	16.01	18.70	.12	100%
1960(4)	21.72	44.06	16.76	17.40	.07	100%
1955	17.51	49.53	16.98	15.95	.04	100%
1950	16.27	56.17	15.37	12.16	.03	100%

\*Revised

(1) Ton-miles between cities and between rural and urban areas included whether private or for hire. Rural-to-rural movements and city deliveries are omitted.

(2) Revenue ton-miles

(3) Does not include coastal and intercoastal ton-miles

(4) 1960 and later years include Alaska and Hawaii

Source: *Transportation Policy Associates, Transportation in America*



As called for by the legislation creating CONRAIL, the rail freight carrier has succeeded in its efforts to become profitable, and the U.S. Government's invitation for bids to purchase CONRAIL 'as directed by the Northeast Rail Service Act of 1981 (NERSA) generated a number of purchase offers. Purchaser and date of completion of the sale are unknown at this time, and specific terms of the sale with regard to future rationalization will, in all likelihood, require new legislation. NERSA permits the sale of the CONRAIL system either as a complete railroad or on a piecemeal basis. Although the present mood in Washington appears to be to sell CONRAIL as a complete railroad system, some interests are actively promoting a piecemeal sale. However, NJDOT feels that New Jersey as well as other states could be seriously disadvantaged by a piecemeal sale of Conrail.

To address this concern, the National Conference of State Railway Officials (NCSRO) has formulated a Statement of policy objectives for the CONRAIL sale. The NCSRO report, which represents the concerns of non-CONRAIL as well as CONRAIL states, identifies ten essential requirements relating to the sale of CONRAIL:

- the new buyer should be able to succeed in the free market;
- the new owner should be required to articulate to the Federal Railroad Administration (FRA) its financial and operational goals;
- the sale agreement should not alter existing contractual agreements;
- the agreement should provide for the continued operation of all routes now in operation;
- the agreement should allow for transfer of any threatened line to responsible parties willing to continue service;
- "high and wide" service routes should be preserved;
- state tax exemptions should not be continued;
- expedited abandonment procedures should be eliminated;
- the new owner should agree to assume all of Conrail's current obligations; and
- the sale should be accomplished expeditiously.

## **b. Orphan Bridges**

The pending sale of CONRAIL has also focused public attention on a long standing, unresolved problem involving highway bridges over rail lines, which have been referred to euphemistically as "orphan bridges", since no one is willing to claim ownership (and, more importantly, responsibility for their upkeep). While this subject is a matter of dispute, the state contends that these bridges are the responsibility of the railroad(s). The financial repercussions could be substantial, as these bridges have been neglected for years and are, generally speaking, in poor condition. CONRAIL (and AMTRAK) contend that, absent any specific mandated responsibility for these bridges in their enabling Federal legislation, they do not shoulder responsibility for obligations of their bankrupt predecessors.

In an attempt to solve this problem and other capital reinvestment problems associated with rail freight, there is some legislative sympathy for the idea of earmarking the proceeds of the CONRAIL sale for reinvestment in rail facilities in the CONRAIL States.

### **c. Increased Truck Size**

The trucking industry has been a long standing advocate of larger dimensioned vehicles, to permit more economical freight transport by motor carriers. Convinced that higher permissible weights and the uniform allowance of larger dimensioned vehicles nationally would benefit interstate commerce, the Congress passed the Surface Transportation Assistance Act of 1982 (STAA) to accomplish these and other objectives.

Uniform standards established by STAA are summarized in Table 7. STAA also directed USDOT to designate a national system of routes over which the larger dimensioned vehicles (i.e. 102 inch wide trucks and the so called, double bottom trucks consisting of cab and two trailers; see Figure 12) could operate. The process of

**TABLE 7**

## **UNIFORM TRUCK SIZE AND WEIGHT STANDARDS**

**Established by the STAA\***

### **Uniform Weight Laws**

- a. Axle Weight: 20,000 lbs.
- b. Tandem Weight: 34,000 lbs.
- c. Gross Weight: 80,000 lbs.
- d. Compliance with Bridge Formula

### **Uniform Length Laws**

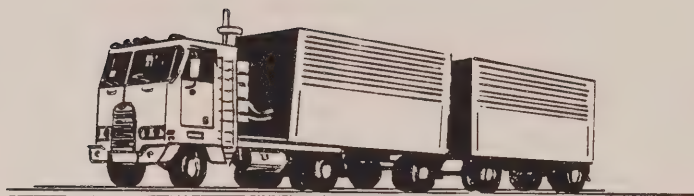
- a. No state may set maximum length of a semitrailer in a tractor trailer combination of less than 48 feet.
- b. No state may set maximum length of trailer in a tractor-semitrailer-trailer combination of less than 28 feet.
- c. State must allow doubles.
- d. State cannot set overall length limitation on combinations.

### **Uniform Width Laws**

- a. No state may set a width limit other than 102 inches.

*\*1982 Surface Transportation Assistance Act*

**FIGURE 12**



**DOUBLE BOTTOM TRUCK**

designating routes entailed extended negotiation between USDOT and the various States. The resultant system is limited in New Jersey (See Figure 13) as it must be, because so much of the state's roadway mileage is still substandard.

All motor carriers using either double-bottoms or 102 inch wide trucks are limited to use of this system, with access off this system permissible by permit to get to and from terminal facilities, and permissible without permit to food, fuel, repair, and rest facilities within one mile driving distance of the system.

As additional links in the Interstate System are completed, along with other roadways meeting design standards which permit the safe operation of these longer dimensioned vehicles, the designated system will be expanded and the use of these larger dimensioned vehicles in New Jersey will grow. Ultimately, the 102 inch wide truck is expected to become the industry standard, replacing the present 96 inch wide truck as the mainstay of the commercial truck fleet.

#### **d. Transportation of Hazardous Materials**

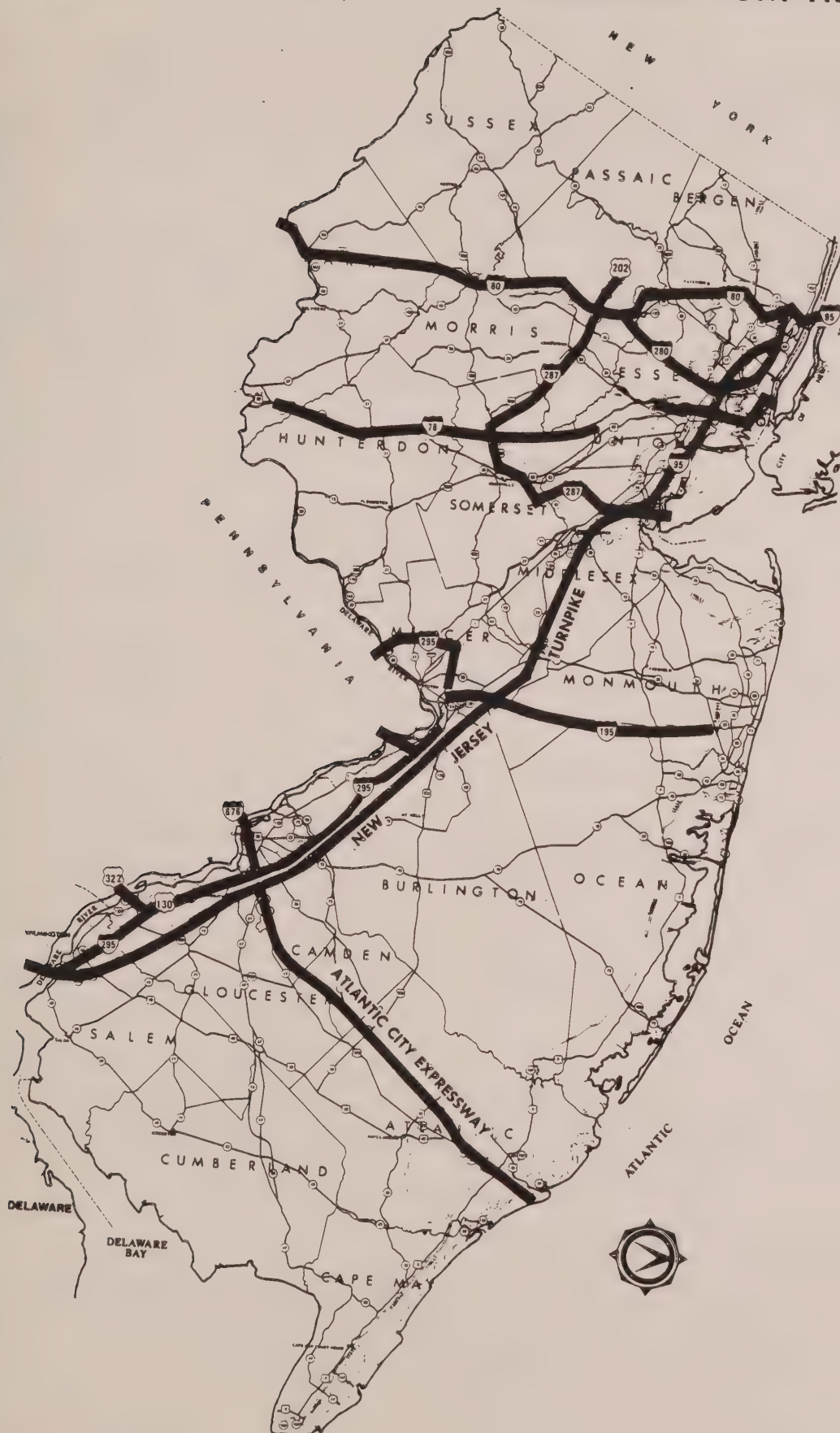
The transportation of hazardous materials has become a matter of increasing concern in New Jersey in recent years. "Spills" have aroused much concern, prompting the State legislature to pass a law in December 1983, directing the Department to adopt regulations related to the transportation of hazardous materials.

An estimated seven million tons of hazardous materials are transported in New Jersey each year. Most of this tonnage is transported on interstate routes. Hazardous material movements represent between five and ten percent of total freight traffic moved in New Jersey. Hazardous material movements by rail constitute approximately 50% of total hazardous freight movements.

Incidents involving hazardous materials have been reported to the USDOT since 1971 by interstate carriers. Data for New Jersey indicates that about 3,000 incidents have been recorded since that date. Incidents involving intrastate movements are not reported, unless a spill is involved in which case NJDEP requires a report.



FIGURE 13  
FEDERALLY DESIGNATED SYSTEM  
FOR 102 INCH WIDE AND DOUBLE BOTTOM TRUCKS



New Jersey has been fortunate in that its safety record has been good to date. The intent of the hazardous materials regulations is to insure the continuance of a safe record and the avoidance of catastrophic incidents.

## **11. Aviation Challenges**

New Jersey has a network of aviation facilities whose character was largely established during the World War II era. The existing system contains 64 airports licensed for public use, ranging from the state's largest airport in Newark to several smaller facilities with turf or grass runways, and 86 private use airfields. There are also more than 336 heliports licensed in the state. There are approximately 15,000 registered pilots and 4,500 based aircraft in the state.

This existing system of aviation facilities plays a central role in the transition of New Jersey's economy into a high technology and service based industry.

### **a. Multimodal Coordination**

The increasing use and dependence of the general public and industry upon air transportation warrants increased emphasis on multimodal coordination and interfacing. Better links between all modes and air transportation must be achieved. This basic principle applies to both the movement of goods and people. With the ever increasing amounts of goods and people being moved by air, the convenience of transferring between surface and air travel has become a crucial issue.

### **b. Accommodating Increasing Demand**

The increasing demand for air services will continue for all sectors of industry and the general public. It is expected that many passengers and products currently using other, surface transportation modes will change over to air travel. This raises basic concerns about the adequacy of the existing capacity of the system, especially during periods of peak demand. Increasing demand could eventually cause involuntary changes in preferred travel times. A related concern is the availability of adequate financial resources to underwrite needed, capital improvements.

### **c. Land Use Compatibility**

Land use adjoining air transportation facilities is a matter of public concern. Noise associated with aircraft is pronounced in areas adjoining airports. "People intensive" land uses next to airports pose safety hazards. To mitigate these problems, land uses permitted in such areas must be carefully controlled.

### **d. Rotary Wing Aircraft (i.e., helicopters)**

The demand for helicopter services is increasing rapidly. With the emergence of this technology, new ways and means to better utilize and integrate this resource are necessary. This technology is improving considerably with time, which should ease public apprehensions, especially in terms of noise.

#### **e. Public Acquisition**

New Jersey has the highest percentage of privately owned airports open to the public in the nation. Conversion to public ownership is desirable in many situations, in that this would increase local public control and improve the general capital funding situation.

#### **f. Regulatory Changes**

As the role of air transportation in society increases, there will be reorientation in the Federal/State relationship in the regulation of aviation. Specialization and decentralization of air transportation regulation authority in certain areas is anticipated. Increased national standardization and increased opportunity for local initiatives are foreseen.

### **12. Emergency Services**

The state's transportation system plays an essential role in the state's and/or nation's efforts to overcome declared emergencies and major disasters. The ability of the system to fulfill this role depends upon the availability of mobilization plans that can be effectively activated should an emergency occur.

Mobilization plans to respond to different types of emergencies and disasters have been developed, and further efforts to enhance these plans are in progress. Principal plans are described below.

- **Emergency Highway Traffic Regulation Plan**
  - Sets forth policies, responsibilities and procedures for the regulation and use of highways within the state in an emergency.
- **State of New Jersey Radiological Emergency Response Plan for Nuclear Power Plants**
  - Directs the development of a comprehensive and coherent response plan to assure maximum protection from a radiation accident at a nuclear facility or during the transportation of radio-active material.
- **Annex "S," N.J. Emergency & Disaster Operations Plan**
  - Defines the N.J. Support Responsibilities in a declared state emergency.
- **NJDOT Mobilization Plan**
  - Establishes policies and procedures for mobilization and responsibilities in the event of a declared emergency or major disaster.
- **NJDOT Emergency Procedures Directory**
  - Establishes emergency response functions and listings of key emergency personnel.

The NJDOT has the responsibility to maintain and update these plans as necessary.



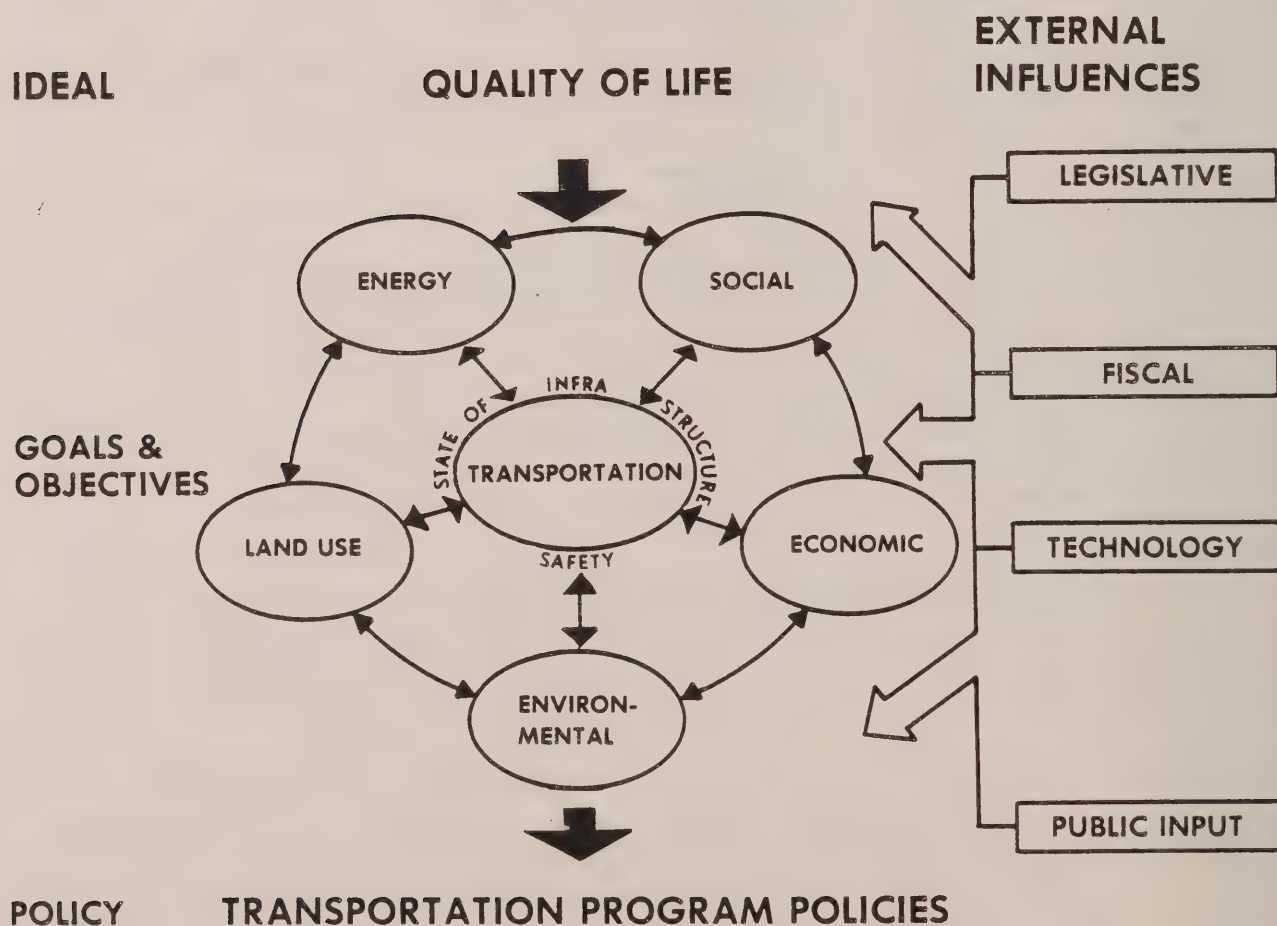
## B. Goals and Objectives

Transportation is a means to an end, and is necessary to satisfy nearly all of our needs. We create the need for transportation facilities and services, and we are affected by the facilities and services provided.

It follows that we must plan transportation facilities and services with a dual awareness: an awareness of the needs which must be served; and an awareness of how the accommodation of these needs affects us.

The essential importance of transportation and its effects on the human and physical environment are graphically portrayed in Figure 14. This graphical representation also acknowledges what are referred to as "external influences", or forces outside of the Department, that must be accounted for in the formulation of a set of goals and objectives, and in the subsequent development of a transportation plan.

FIGURE 14  
DEVELOPING TRANSPORTATION  
PROGRAM POLICIES



In formulating a set of goals and objectives, the Department has attempted to maintain the dual awareness described previously, and to account for the major issues (discussed in the previous section) and external influences, which collectively constitute the conditions we presently confront. Thus a set of goals and objectives relating to the needs which must be served (i.e., Transportation), and relating to the effects of serving these needs (i.e., Economic, Social, Environmental, Land Use, and Energy) have been developed, and are described in the next section.

These goals and objectives, in turn, serve as a basis for the development of what the Department refers to as program policy statements, which are the actions the Department believes it must take to achieve the goals and objectives. The program policy statements are described following the discussion of goals and objectives.

### **1. Transportation-Economic Goal**

Use the transportation system as a tool to maintain the economic viability of the state and to enhance economic growth.

#### **Objectives**

- Insure that the existing transportation system is properly maintained.
- Promote a complementary relationship between land development and each component of the transportation system to maintain consistency with state economic development policies.
- Consider all impacts of new or improved transportation facilities on existing businesses and on the potential to act as a catalyst for growth.
- Identify locations with economic development potential, plan facilities, and program funds to serve the projected development with transportation facilities in the most efficient and cost-effective manner possible.

### **2. Transportation-Social Goal**

Establish and maintain a transportation system which allows New Jersey's citizens and visitors the opportunity to participate in the full gamut of social activities.

#### **Objectives**

- Promote social well-being by enhancing the accessibility of employment, educational, religious, cultural, recreational, medical and other activities, and by encouraging expansion of the range of opportunities for such activities.
- Maintain neighborhood integrity in the development of new facilities.
- Improve the accessibility of those persons with physical or economic handicaps (i.e., handicapped, elderly, young, the economic disadvantaged) so that they may participate in the mainstream of social activities.

### **3. Transportation-Environmental Goal**

Establish and maintain a transportation system which complements the state's desire for a clean, healthful and pleasant living environment.

## **Objective**

- Plan, design and construct transportation facilities with the aim of minimizing adverse environmental impacts.

## **4. Transportation-Land Use Goal**

Strive for a complementary relationship between land development and each component of the transportation system to promote state preservation and economic development goals.

### **Objectives**

#### **(1) Promote Economic Growth**

- Promote new facilities or improvements to existing facilities which encourage the clustering of economic activities.
- Promote transportation modes consistent with existing or desired population densities.
- Give priority to transportation investments which are vital to the economic development of the state.
- Promote a balanced and coordinated transportation system which will reduce congestion and improve travel time.
- Discourage land development which will require transportation investments out of proportion to the benefits the new development will create.

#### **(2) Preservation**

- Discourage new facilities or improvements to existing ones which would promote development in areas which the state wishes to preserve as agricultural, open space, etc.
- Manage automobile travel in such a manner so as to increase the people carrying capacity of the highway system to minimize the need for additional lane miles.
- Ensure that transportation plans, projects, and programs strive to maintain the preservation of environmentally sensitive lands and waters defined by the Department of Environmental Protections' Coastal Management Program, the Pinelands Preservation Plan, Green Acres Program, Parks and Forests Management Programs, Wetlands, Riparian Lands, and Flood Plains Management Programs, and Stream Encroachment and Water Planning Resources Programs.

#### **(3) Accessibility**

- Discourage land development in areas where such development will severely overtax the capacity of existing transportation facilities if improvements to the existing system are impractical.

## **5. Transportation-Energy Goal**

Contribute to energy conservation efforts by promoting public transportation and ridesharing, and by encouraging the more efficient use of the highway system through low cost transportation improvements which facilitate traffic flow.



## **Objectives**

### **(1) Conservation**

- Encourage greater use of more energy-efficient modes of transportation including public transportation, carpooling, vanpooling, bicycling, and walking.
- Encourage multi-purpose trip-making instead of single purpose auto trip-making.
- Support the New Jersey Department of Energy's programs and transportation conservation policies.
- Support research and development of new energy forms, existing untapped energy resources, and more energy-efficient transportation vehicles.

### **(2) Energy Planning**

- In cooperation with the New Jersey Department of Energy, assist in the preparation of contingency plans for petroleum emergencies for the state.
- In cooperation with the New Jersey Departments of Energy and Labor, assist in the preparation of a long-range, long-term transportation energy plan.

## **6. Transportation-Program Goals**

The basic transportation goal for New Jersey is the development, coordination, and maintenance of a transportation system that provides for the movement of people and commodities in an efficient, time-effective, convenient, safe, reliable, and cost-effective manner.

## **Objectives**

- Complete and/or improve the essential links of the intercity transportation system.
- Provide integrated transportation systems in urban and suburban areas which augment and support the intercity transportation system and serve major activity centers within these areas.
- Plan transportation system improvements comprehensively, in cooperation with the metropolitan planning organizations, local agencies, elected officials, and interested citizens.
- Promote the development of a transportation system which connects the major rural concentrations of population with urban centers.
- Promote the development of a transportation system which serves key corridors not already served by the intercity transportation system.
- Promote the development of transportation systems and programs which provide travellers with modal choices.
- Preserve essential rail freight services.
- Upgrade key highway links which are vital for freight movement to facilitate the use of more economic forms of motor carrier transportation.
- Promote the preservation and improvement of airports throughout the state, including the adoption by municipalities of land use policies complementary to airports in areas adjoining the airports.

## C. Program Policy Statements

The ensuing program policies are categorized as follows:

- Passenger Railroad Facilities and Services
- Bus Facilities and Services
- Paratransit
- Highways, Bridges, and Streets Program
- Ridesharing Programs
- Bicycle Facilities and Programs
- Pedestrian Facilities
- Park-and-Ride Program
- Freight Services
- Aviation Services

### 1. Passenger Railroad Facilities and Services

#### *Give High Priority to Preserving Essential Service and Promoting Ridership*

Certain corridors are highly dependent upon railroad service, and the deterioration or loss of such service would create serious hardship. It is essential that such rail service be preserved.

#### *Maximize System Operational Flexibility and Efficiency*

The Department will give high priority to the development of prospective rail system improvements which are demonstratively cost-effective in reducing operating costs and/or increasing passenger ridership and revenues.

#### *Rebuild the Physical Plant*

The state, through NJ TRANSIT, owns 425 miles of railroad rights-of-way, as well as stations and other supporting facilities. Much of the system was neglected by the former bankrupt owners for many years and although the state has made great strides in rebuilding the system, these efforts must continue to insure reliable, comfortable, and on-time performance.

#### *Replace Obsolete Rolling Stock*

The state owns all coaches, electric commuter cars, and locomotives used in its commuter rail service. Replacement of equipment which is old, uncomfortable, and unreliable must be continued.

#### *Maintain an Appropriate Level of Service*

It is essential that trains run on time, heating and air conditioning systems be in working order, seats and parking be available, seats and floors be clean, train crews be at work, tracks be unobstructed, signals and communication systems be operating, and stations be open to the public.

The state reaffirms its intention to see that rail passenger service is maintained at the highest level possible within the confines of financial capability. Any increase in frequency of service must, however, be tempered by cost effectiveness considerations.

#### *Promote Balanced Fare Structures*

It is essential that fare structures be set at a practical level which will maintain existing ridership and bring about increased ridership. This policy requires that operating subsidies be continued for all essential rail service, and that said subsidies be sufficient to avoid the need for excessive fare increases.

Moreover, a consistent fare policy must be established that treats bus and rail riders equitably, and satisfies operating cost recovery targets.

#### *Provide Accessibility for the Elderly and Handicapped*

Most of the state's commuter rail system has limited accessibility for the elderly and physically disabled. Without the ability to drive a car and without accessibility to public transit, these individuals have restricted mobility. Improvements which would facilitate access to the system, e.g., renovating stations and platforms, have and will continue to be implemented where appropriate. The benefits which would result from such improvements must be weighed against the benefits which would result from other alternatives, e.g., paratransit, to ascertain how this "accessibility" policy would be best achieved.

#### *Provide Appropriate Protection at all Rail-Highway Crossings*

It is essential to the efficient and safe operation of both the rail and highway systems that all rail/highway crossings be appropriately protected from conflicting movements.

#### *Expand Appropriate Rail Service to Developing Areas and to Areas Experiencing Pronounced Traffic Congestion and Slow Travel Speeds Where it is Judged to be Cost-Effective*

As New Jersey's population continues to grow, and more dense corridors develop, railroad services will potentially play a key transportation role in the orderly growth of these developing areas. It is essential that the rail investments be considered as an integral part of the planning for these new growth areas. In already developed areas where traffic congestion has grown and travel times have deteriorated, travel patterns may warrant new rail service.

The Department will study areas exhibiting the foregoing characteristics on a case-by-case basis, and identify the most cost-effective transit improvement options.

#### *Retain Discontinued Rail Service Rights-of-Way for Future Use*

There are numerous commuter and freight rail lines which have been discontinued and abandoned over the years. These rights-of-way could be a valuable asset to future transportation growth and development and will be retained where feasible for potential, future use.

#### *Encourage Priority Allocation of Energy Supplies to Rail (and Bus) Systems*

As discussed previously, rail and bus service is highly efficient in terms of energy used per



passenger mile. During emergency energy situations, the Department will encourage a priority allocation of fuel to rail and bus systems.

#### *Encourage Local Pride in Railroad Stations*

Historically, railroad station facilities have been located in or adjacent to central business districts of municipalities along the rail lines. The railroad stations have, in the past, served as a spur to development of town centers, as well as residential communities. Because of the prominent position a railroad station usually occupies in a community, serving as an anchor or as the hub of a town's commercial center, the station should be a source of municipal pride as well as a social and economic asset. For this reason, the state will encourage local community involvement in the upkeep and improvement of station facilities.

#### *Encourage Local Community Involvement in Maintenance and Security of Railroad Stations*

A local municipality is in the best position to notice maintenance problems quickly and attend to them to insure clean and safe station operation. Similarly, the necessary level of personal security can be more adequately provided at a local level. Local communities will be encouraged to lease railroad stations and related facilities. Station operation and maintenance costs can be incorporated into existing municipal budgets at modest cost.

#### *Retain Limited Control of Railroad Stations to Insure Full Access to the State-Owned and Subsidized Commuter Rail System*

The state's involvement in station operation is required in a limited manner. Responsibilities include standards for maintenance, parking fees, surveillance, signage and information, supervision of ticketing and commuter fares, and control over station uses which might unduly limit or interfere with commuter operations.

#### *Restore and Improve Rail Station Facilities*

Some station facilities have been neglected and have deteriorated to an unacceptable condition. Other station facilities are no longer appropriately sized for existing demand and operations.

In addition, although station facilities are a prominent feature of most communities, many have not been improved and developed to complement, reinforce and function as a vital part of the surrounding areas.

To address these problems, station facilities shall be restored and improved by the state to achieve the following:

- Facilities should be sized for current levels of usage and be operationally efficient.
- Facilities should be permanent, durable, resistant to abuse and easy to maintain at minimal costs.
- Stations should provide an attractive, bright, highly visible, and high quality environment, meeting modern standards of comfort and safety.
- Facilities should be energy-efficient.

- Stations must be designed for easy movement to and from the various modes of transportation used to arrive at and depart from the station.
- Joint use and multi-purpose development in and around public transit facilities will be encouraged.
- Stations must be developed so that they are compatible with community needs and activities.
- Park and ride accommodations for commuters driving long distances to access rail will be generally encouraged at stations in outlying communities rather than center city stations.
- Parking facilities for bicycles will be provided and located as close to the station as possible.

## **2. Bus Facilities and Services**

### *Preserve Essential Bus Service and Promote Sustained and Increased Ridership*

Provide levels of bus services commensurate with need, accounting for prevailing travel patterns, travel densities, and the presence of transportation disadvantaged. Route modifications, additional service for heavily travelled lines, special provisions for the handicapped, and an aggressive marketing program will be continued. Continued operation of non-subsidized private bus operators will be encouraged.

### *Modernize and Maintain Equipment and Facilities*

Continued modernization of bus facilities and rolling stock will occur, so that operating economies can be realized and no publicly owned buses are older than their useful economic life. The proper maintenance of all publicly-owned buses will be a paramount aim of the state.

### *Foster the Coordination of Public Transportation Service*

As noted earlier, there is a clear legislative mandate in NJ TRANSIT's enabling legislation to encourage to the maximum extent feasible the participation of private enterprise and to avoid destructive competition. To this end, NJ TRANSIT shall coordinate existing bus schedules and routes between public and private services in the state, and continue its efforts to negotiate with private carriers where destructive competition is alleged. NJ TRANSIT shall also continue to offer support to private carriers, including publicly funded buses and ancillary equipment presently available under lease arrangement.

### *Continue Efforts to Counteract the Adverse Effects of the Bus Regulatory Reform Act*

NJ TRANSIT and long established private carriers are in agreement that the ICC's laissez-faire policy with regard to newly proposed, interstate services has been injurious to commuter services in the New York metropolitan area. Efforts to cause the ICC to enforce the safeguards in the Bus Regulatory Reform Act designed to avoid such destructive competition, or in the alternative to remove the ICC from jurisdiction in this geographic area through Federal legislation, shall be pursued.

#### *Promote Progressive Management*

Where it is determined that improved service can be provided to the public through better coordination of public and private operations, NJ TRANSIT will work directly with the private operators. On the other hand, where public operation is viewed as the best way to improve service, NJ TRANSIT will acquire facilities and services outright.

#### *Promote Improved Performance*

Service rationalization efforts will continue. Service adjustments will be made to eliminate service duplication, improve travel speeds, and increase ridership. Closer supervision of buses on the streets, by the utilization of modern communications and other monitoring techniques, will result in closer adherence to schedules and the ability to respond quickly to service disruptions.

### **3. Paratransit**

#### *Encourage Local Initiative*

Local initiative is this program's basic tenet. The localities should be encouraged to take a larger role in solving local transportation problems. Generally, the county should be the coordinating unit and assist in the identification of local mobility needs and appropriate paratransit solutions.

A single recipient for each county should serve as the broker for all state and federal funds flowing into their jurisdictions.

#### *Promote the Use of Existing Transportation Resources*

Encouraging the utilization of existing local transportation resources to meet these needs, such as local private operators and existing public services, will make this program more economical.

#### *Foster Coordination*

Efforts will be made to achieve greater coordination of existing paratransit services. This will require greater communication with, and the provision of technical assistance to, local governing bodies. Maximum participation of private operators will also be encouraged so as to benefit from their expertise in providing these services.

#### *Integrate Paratransit with Conventional Services*

The Department and NJ TRANSIT shall encourage the linking of paratransit services to conventional transit wherever feasible. Ideally, the local paratransit network should function as a collector/distributor service for conventional transit in low-density or low-transit demand areas.



#### **4. Highways, Bridges and Streets Program**

##### *Give High Priority to Constructing Essential Missing Links*

There are several segments of the statewide freeway system (both Interstate and non-Interstate) which are still incomplete. The absence of these essential "missing links" severely curtails the full measure of service that could be provided by the freeway system and places an undue burden on county and local roads which must "bridge the gap" in the interim. This has led to many instances of severe localized congestion and its attendant problems. Completion of these missing links is essential to the circulation and proper functioning of the freeway system.

##### *Improve Existing Facilities Rather than Construct New Ones*

There are numerous links in the statewide highway system which are currently deficient or are expected to be deficient in capacity in the future. To address such problems, the Department will as a first resort seek to improve the carrying capacity of the highway corridor by improving the existing facility. Moreover, the Department will seek wherever possible to remedy such problems with the implementation of Transportation System Management (TSM) measures rather than more costly, wholesale physical expansion of a facility. However, it may be necessary in certain instances to develop new highways or highway extensions for orderly and desired economic development.

##### *Improve Substandard Links in the Highway Network*

There are a number of links in the state highway network which are deficient by accepted Department standards. Such deficiencies contribute to hazardous and uncomfortable driving conditions. Such deficiencies include, but are not limited to, extreme horizontal and vertical curves, 3-lane highways, undivided 4-lane sections of highway, and deficient lane or shoulder widths. In the interest of safety, the Department will maintain an on-going program to identify and improve these deficient sections.

##### *Improve Hazardous and Congested Spot Locations*

A number of locations exist throughout the state's highway system which are points of severe traffic congestion or are highly hazardous locations. Such spot locations include: over-capacity intersections; traffic circles, inadequate or unsafe bridges, and hazardous rail/highway crossings. The Department will maintain an on-going program to improve conditions at such locations.

##### *Integrate the Highway System with Existing and Proposed Public Transit Systems*

To promote more extensive use of the state's public transit system, the Department will seek to integrate the highway system with the existing and proposed public transit system. To facilitate modal change and increase public transit patronage, the highway program will strive to maximize highway access to public transit terminals, stations, and park-and-ride lots. Moreover, the Department will conscientiously try to avoid making highway improvements which appear likely to result in significant, adverse effects on public transit ridership.

*Encourage the Elimination of On-Street Parking On Major Arterials in Congested Areas*  
On-street parking, especially during peak periods, deprives moving vehicular traffic of essential highway capacity. The elimination of on-street parking from major arterials during peak periods in congested areas can do much to improve traffic flow and reduce congestion and in many cases can negate the need for additional capacity improvements.

*Encourage Measures Which Will Spread the Peak Period*

The majority of traffic problems occur during the morning and evening journey-to-work and return trip. During each of these periods, as much as 8% to 10% of the total daily traffic carried by a highway facility can occur. By spreading the peak period, significant reductions in traffic congestion and capacity needs can take place. The Department will encourage public and private agencies, business, and industry to enter into a coordinated program to vary working hours so as to reduce traffic peaking characteristics. Possible measures include the staggering of work hours, flex-time, and the 4-day work week. The possible effect of such measures on transit use will be gauged, however, so that measures are not encouraged in areas where the effect will be highly detrimental to transit.

*Consider Bicycle Traffic in Facilities Design and Construction*

The bicycle is a legitimate and viable transportation mode. The bicycle has essentially the same rights to the road as motor vehicles. Therefore, the transportation infrastructure should be constructed in such a way as to accommodate the shared use by both motor vehicles and bicycles. Further, the bicycle will be encouraged as a viable option for short trips.

*Consider Pedestrian Traffic in Facilities Design and Construction*

Walking is a viable alternative for fair weather short trips. Therefore, such movement should be encouraged to occur through a separation of vehicular and pedestrian traffic. This will facilitate pedestrian movement where such movement was previously unsafe (real or perceived) and allow vehicular traffic to flow with minimum interference from pedestrians.

*Encourage Enforcement of the 55 MPH Speed Limit*

Enforcement of the 55 mph limit has yielded many public benefits: reduced the number of fatalities; reduced property damage and injuries; and provided significant savings in energy. The Department of Transportation assists the Division of State Police in the Department of Law and Public Safety in maintaining the speed limit. This cooperative effort and support will be maintained.

*Locate Interchanges on Freeways and Expressways Consistent with the State's Redevelopment Objectives*

Interchange locations on such facilities will be minimized except in those areas where such access is vital to desired development. This policy will maintain the integrity of the system as well as serve the transportation, growth, and development aims of a region.



### *Control Accessibility to the State Highway System*

Accessibility to the state highway system is provided by the Department through a driveway permit procedure. State law permits denial of access should studies indicate that the transportation system is incapable of handling the additional traffic burden generated by new development or that safety hazards would result.

The Department recognizes its responsibility to provide access, however, so long as such access does not compromise the safety and efficiency of the highway system. Therefore, where it is necessary, the Department may modify the means of access and ask the developer to share the cost of necessary improvements to the adjacent highway system.

### *Advocate the Use of Energy Efficient Motor Vehicles*

The Department will promote the use of more energy-efficient means of travel on the state's highways, including car and vanpooling, public transit, bicycling, etc. Moreover, the Department will advocate strategies which encourage the use of smaller, light-weight, more energy-efficient motor vehicles.

### *Minimize Disruption During Construction*

Highway construction can have serious impacts on neighboring communities. It is imperative that disruption to the community as well as the user be minimized during highway construction.

### *Utilize the Most Efficient Technologies and Methodologies Available for Operating and Maintaining the Highway and Street System*

As technological innovations continue to be developed for the operation and maintenance of highway facilities in such areas as highway lighting and signalization, resurfacing, and snow removal, the Department will pursue, investigate, and adopt those innovations which are energy efficient and cost saving.

### *Negotiate Jurisdictional Responsibilities Consistent with Functional Classification Concepts Where Feasible*

Changes in land-use, population density, and highway travel patterns have caused the functional usage of a significant number of highways and streets in the state to change over the years. Consequently, there are instances where state highways are serving "local" travel, and local roads are carrying travel of regional significance. To rectify this, the entire statewide system of highways and streets should be investigated for possible, jurisdictional realignment, so that facilities are administered by the levels of government which best represent the function of the facility. The Department will attempt to negotiate such jurisdictional realignments with county and local governing bodies, based on the concepts of functional classification.



## **5. Ridesharing Programs**

*Assist Both Public and Private Employers and Employees Who Wish to Establish Carpooling and Vanpooling Programs Where They are Needed and Desired*

The Department will continue its carpooling and vanpooling promotional efforts seeking to avoid competition with public transit.

*Assist Local and Other State Government Departments, Their Instrumentalities, and Private Companies, in Encouraging Ridesharing by Supporting Existing Carpooling and Vanpooling Programs, and Providing Technical Assistance*

The Department will furnish advice and assistance to any agency within the state, public or private, which desires to implement a carpool or vanpool program.

*Coordinate the Department's Ridesharing Efforts with the Departments of Environmental Protection and Energy, other Affected Departments, Local and County Governments, Metropolitan Planning Organizations, and State Highway Authorities*

It is important that a unified approach be maintained in New Jersey's ridesharing efforts. Much of this effort will overlap both jurisdictional and administrative functions; thus success can be achieved only by a concerted effort on the part of all participants involved.

## **6. Bicycle Facilities and Programs**

*Reduction of Bicycling Accidents through Education*

The Department of Transportation will coordinate with the schools in order to teach bicycle safety to the children of the State.

The Department will work with the Department of Motor Vehicles to encourage, through the automobile licensing and registration system, driver awareness of how to avoid car-bicycle accidents.

The Department will use the electronic and printed media to bring bicycle safety to the attention of New Jersey's citizens.

*Promote Statewide Registration of Bicycles*

The Department will encourage the local governments of the State to institute standardized bicycle registration procedures in order to reduce theft and facilitate recovery of stolen bicycles.

*Provide Cyclists with Maps Showing Local Routes, Tourist Routes, and General Information*

The Department will continue and expand its bicycle mapping program.

*Encourage the Use of Bicycles by the Public*

Advocate and promote local governments to amend ordinances to require bicycle parking facilities in all new building construction.

Make available to eligible agencies federal funding for bicycle facilities, including parking, storage and shelters.

## **7. Pedestrian Facilities**

*Provide Safe Waiting Areas Adjacent to Highways for School Bus and Mass Transit Patrons*  
Such a policy will encourage bus ridership and reduce accidents involving pedestrians.

*Provide for Safe, All-Weather Walking Space Along Highways in Those Areas Where Pedestrian Traffic is Likely to Occur*

Many highways and expressways near urban areas lack pedestrian walkways, and thus tend to isolate areas they traverse. Walkways, important in maintaining residential and commercial district interaction and cohesion, will be provided in conjunction with future road work.

*Provide Pedestrian Overpasses at Locations Where Such Overpasses are Warranted by Department Guidelines and Where At-Grade Pedestrian Crossings are not Feasible*

Pedestrian overpasses can be useful in selected areas as they permit the safe crossing of a highway which would otherwise be impassable or extremely hazardous.

*Provide Appropriate Pedestrian Protection at All Highway Intersections*

This will facilitate and improve pedestrian circulation and safety. It can be achieved by pedestrian-actuated traffic signals, crosswalks and a uniform system of signing, or pedestrian overpasses, where warranted.

## **8. Park and Ride Program**

*Increase Transit Ridership Through the Improvement of the Current System of Bus and Rail Parking Facilities*

This policy will support increased transit ridership through improvement and expansion of existing parking facilities. The following principles will apply:

- Improve existing facilities to an acceptable capacity and operating standard; reallocate excess demand and capacity through transit service adjustments or parking management techniques; improve joint-use arrangements to reduce risk of parking privilege loss.
- Provide preferential parking for carpoolers and vanpoolers and provide bicycle lockers at facilities where feasible.
- Seek early and active community participation in park-and-ride lot expansion or adjustment activities; expand only those facilities which neither inhibit community development goals nor adversely affect adjoining land uses.
- Seek management and operation agreements that place responsibility at the local level; arrange fair and equitable rates for parking and define whether "residency" requirements are or are not appropriate.

### *Develop New Park-and-Ride Facilities that Will Successfully Penetrate the Auto-Driver Travel Market*

The development of new park-and-ride lots should concentrate only on projects which will successfully penetrate the auto-driver travel market. Only those with the greatest potential should be pursued as a high priority. Guidelines to be followed in the development of new facilities are:

- Consideration for new locations will be given to those with potential for maximum auto diversions and minimum transit diversions. Accordingly, "close in" park-ride sites for Manhattan and Philadelphia bound commuters will be generally avoided.
- New facilities will be considered by an area, corridor or system approach, with preference given to sites with staging opportunities.
- Early and continuous participation of local and county interests in project development will be sought; decisions concerning location, facilities, service, funding, acquisition, construction, management, and operation will be made in consultation with local and county interests.
- Transit carrier participation will be sought; competition between carriers or between services will be avoided.
- Reliance will be placed on municipal agencies to manage and operate new park-and-ride lots. Parking rates will be set based on operating and maintenance costs.
- Joint use of existing or proposed parking spaces for other business or commercial purposes will be investigated for transit and para transit purposes as well.

## **9. Freight Services**

### *Undertake and Maintain a Technical Advisory Program*

Maintain contact and coordination with local units of government, users of freight service and providers of freight service.

Make technical transportation and economic data in the possession of the Department available to interested parties.

Within the limitations of available staff and financial resources, acquire new data, perform studies and offer advice to interested parties to insure that freight transportation decisions are based on the best possible information.

### *Develop Joint, Public/Private Sector Solutions to Freight Problems*

Encourage the private sector to assume the primary responsibility for supporting freight transportation services. Assist the private sector in determining the costs and benefits of initiating or continuing freight service.

Use public funding only when a determination has been made that the use of public money for a short period of time will result in additional private sector financing and investment and yield economic benefits to the State and local communities.

When public sector investments have been made, establish user charges, where appropriate, to recoup the funds for re-use in other problem areas.



*Insure that the Movement of Goods Within New Jersey is Accomplished within a Safe Operating Environment*

Establish regulations to insure safe operating standards for freight service in New Jersey when required and when not preempted by federal legislation.

Assist state and/or federal agencies in the investigation of accidents and incidents involving freight transportation services, particularly those involving hazardous substances. Monitor the movement of hazardous cargo in compliance with state and federal regulations for such movement.

*Press for Resolution of the Orphan Bridge Problem*

Continue lobbying efforts to bring about Federal financial support for the repair of these bridges, and the assignment of maintenance responsibility.

*Seek to Influence USDOT's Pending Decision on the Sale of CONRAIL so that the Choice of Purchaser and the Terms of the sale are Favorable to the State.*

**10. Aviation Services**

*Establish an Aviation Advisory Service for Users and Suppliers of Air Movement, Facility Owners and Operators, Local Governments and the General Public*

The Department will take steps to keep the aviation industry, the users of aviation facilities and services, local governments and the general public aware of activity in the field of aviation, particularly activity affecting New Jersey.

The Department will also encourage local governments to strive for compatible land use adjacent to airports, and to take the initiative in improvement of aviation facilities.

*Maintain and Improve the Safety and Quality of the Existing Aviation Infrastructure*

Encourage the retention of existing facilities; discourage their conversion to alternate uses.

Use, and encourage others to use, advanced technology to improve the all-weather reliability of the system.

Use available state funds to leverage the maximum amount of federal and private funds for safety improvements as well as quality improvements.

Propose major new facility construction only when improvement of existing facilities is impractical or not cost effective; provide state funds for new construction only when major economic benefits can be achieved for relatively low amounts.

*Promote and Enhance the Use of Aviation as a Tool for Economic Improvement*

Eliminate unneeded and/or duplicative regulations.

Utilize aviation user fees to enhance aviation facilities for the public good.



## V. SHORT RANGE PLAN

The Short Range Plan consists of *projects* which are scheduled for implementation, in whole or in part, over the next four years, (i.e., fiscal years 1985-1988), and *planning and preliminary engineering efforts* which will be conducted during this same time frame to ready projects for subsequent implementation.

The projects contained in the Short Range Plan include capital investments that are the end result of prior, long range planning efforts, and still other investments designed to enhance operation and performance. Many are modest cost improvements commonly referred to as "transportation systems management (TSM)" projects, and are largely the end result of prior, short range planning efforts focused on the operation and performance of the existing transportation system.

The ensuing description of projects groups the projects by funding program and type as follows:

- Projects funded as part of the Transportation Trust Fund and New Jersey Bridge Rehabilitation and Improvement Act (see pages 16 and 17 for discussion of these funding programs):
  - public transportation
  - highways, roads, and bridges
- Toll Road, Toll Bridges, and other Toll facility projects funded by collected revenues from users;
- AMTRAK sponsored projects;
- Freight Projects;
- Aviation Projects.

### A. Capital Projects (Includes Engineering)

The following discusses those capital projects included in the aforementioned programs.

#### 1. New Jersey Transportation Trust Fund and New Jersey Bridge Rehabilitation and Improvement Act.

##### a. Public Transportation

The Short-Range Plan focuses on stabilizing essential public transportation services through improvements and modernization. Studies of potential rail expansion and expanded bus services are also slated for this period.

The Short-Range Plan for Public Transportation is summarized in Table 8 and listed in Table 9. Although the plan covers the period 1985-1988, Table 9 also shows dollar amounts for prior years and fiscal years 1989 and beyond. These dollars are shown to give an indication of the total investment envisioned by the plan, as several projects in the plan will receive partial funds in each of these time periods as well. Major projects are mapped in Figure 15.



**TABLE 8**  
**SHORT-RANGE PLAN FOR PUBLIC TRANSPORTATION**  
**(FY 1985 - 88)**  
**SUMMARY BY IMPROVEMENT TYPE**

IMPROVEMENT TYPE	PRIOR YEAR FUNDING	TOTAL F.Y. 1985-1988
I. Major Rail Construction	639.3	135
II. Rail Operations Support Facilities	214.8	220
III. Rail Support Vehicles & Equipment	4.7	10
IV. Rail Rolling Stock	30.4	74
V. Rail Passenger Facilities	72.7	40
VI. Bus Operations Support Facilities	97.6	169
VII. Bus Support Vehicles & Equipment	38.9	35
VIII. Bus Rolling Stock	190.2	179
IX. Bus Passenger Facilities	13.2	34
X. Project Development Studies	1.1	4

*Note: All amounts are in millions of current dollars. For the period F.Y. 1985-1988, all amounts have been rounded to the nearest million dollars.*

**TABLE 9**  
**SHORT-RANGE PLAN FOR PUBLIC TRANSPORTATION**

LOC. NO.	IMPROVEMENT TYPE	PRIOR YEAR FUNDING	TOTAL F.Y. 1985-1988	F.Y. 1989 & BEYOND
	<b>I. Major Rail Construction</b>			
1	Electrification NJCL Phase II	178.7	37	...
2	Kearny Connection	0.2	67	7
3	Montclair/Boonton Project	1.2	20	...
4	Reelectrification M&E	459.2	11	...
	Subtotal	639.3	135	

*Note: All amounts are in millions of current dollars. For the period F.Y. 1985-1988, all amounts have been rounded to the nearest million dollars.*

*Location number is keyed to Figure 15.*

**TABLE 9 (CONT'D)**  
**SHORT-RANGE PLAN FOR PUBLIC TRANSPORTATION**

OC. IO.	IMPROVEMENT TYPE	PRIOR YEAR FUNDING	TOTAL F.Y. 1985-1988	F.Y. 1989 & BEYOND
	<b>II. Rail Operations Support Facilities</b>			
-	Electric Traction System Rehabilitation	- - -	9	2
-	Culverts, Dams and Drainage	1.7	3	4
-	Hoboken Switch Heaters/Power System	- - -	6	- - -
5	Rail Equipment Maintenance Facility	88.1	24	- - -
-	Standby Electric Power	2.1	1	- - -
-	Facilities and Yards	0.7	13	4
-	Systemwide Signals and Communications Upgrade	0.4	20	12
-	Railroad Bridge Rehabilitation	52.4	72	24
6	Raritan River Bridge Replacement	- - -	- - -	7
-	Statewide Track Rehabilitation	49.5	68	60
-	Newark city Subway (Dual Feeder Cable)	19.9	1	- - -
-	E/L Critical Program	- - -	3	- - -
	Subtotal	214.8	220	
	<b>III. Rail Support Vehicles &amp; Equipment</b>			
-	Non-Revenue Vehicle Purchases	2.5	7	4
-	Maintenance of Way Equipment Purchase	- - -	2	3
-	Electro Data Processing	2.2	1	- - -
	Subtotal	4.7	10	

*Note: All amounts are in millions of current dollars. For the period F.Y. 1985-1988, all amounts have been rounded to the nearest million dollars.*

*Location number is keyed to Figure 15.*

**TABLE 9 (CONT'D)**  
**SHORT-RANGE PLAN FOR PUBLIC TRANSPORTATION**

LOC. NO.	IMPROVEMENT TYPE	PRIOR YEAR FUNDING	TOTAL F.Y. 1985-1988	F.Y. 1989 & BEYOND
<b>IV. Rail Rolling Stock</b>				
-	Associated Capital Maintenance	5.1	13	10
-	Rail Vehicle Modernization	1.7	6	5
-	Comet I Overhaul	5.0	15	---
-	Dual Power Locomotives	0.4	18	---
-	U34 Overhaul	0.9	---	6
-	GP40 Overhaul	2.9	---	7
-	Arrow I Overhaul	12.8	2	---
-	Arrow III Overhaul	1.6	15	25
-	F40 Overhaul	---	5	---
-	PCC Replacement - Newark City Subway	---	---	24
	Subtotal	30.4	74	
<b>V. Rail Passenger Facilities</b>				
-	Commuter Rail Station Rehabilitation	65.0	13	11
-	NY Penn Station Commuter Facility	---	2	---
-	Rail Park and Ride Program	7.4	8	9
7	Trenton Parking Garage	0.3	10	---
8	South Brunswick Park and Ride	---	7	---
	Subtotal	72.7	40	
<b>VI. Bus Operations Support Facilities</b>				
-	Bus Maintenance Facility	92.5	154	12
-	Immediate Action Improvements	5.1	12	7
-	Centralized Revenue Collection Facility	---	3	---
	Subtotal	97.6	169	

*Note: All amounts are in millions of current dollars. For the period F.Y. 1985-1988, all amounts have been rounded to the nearest million dollars.*

*Location number is keyed to Figure 15.*



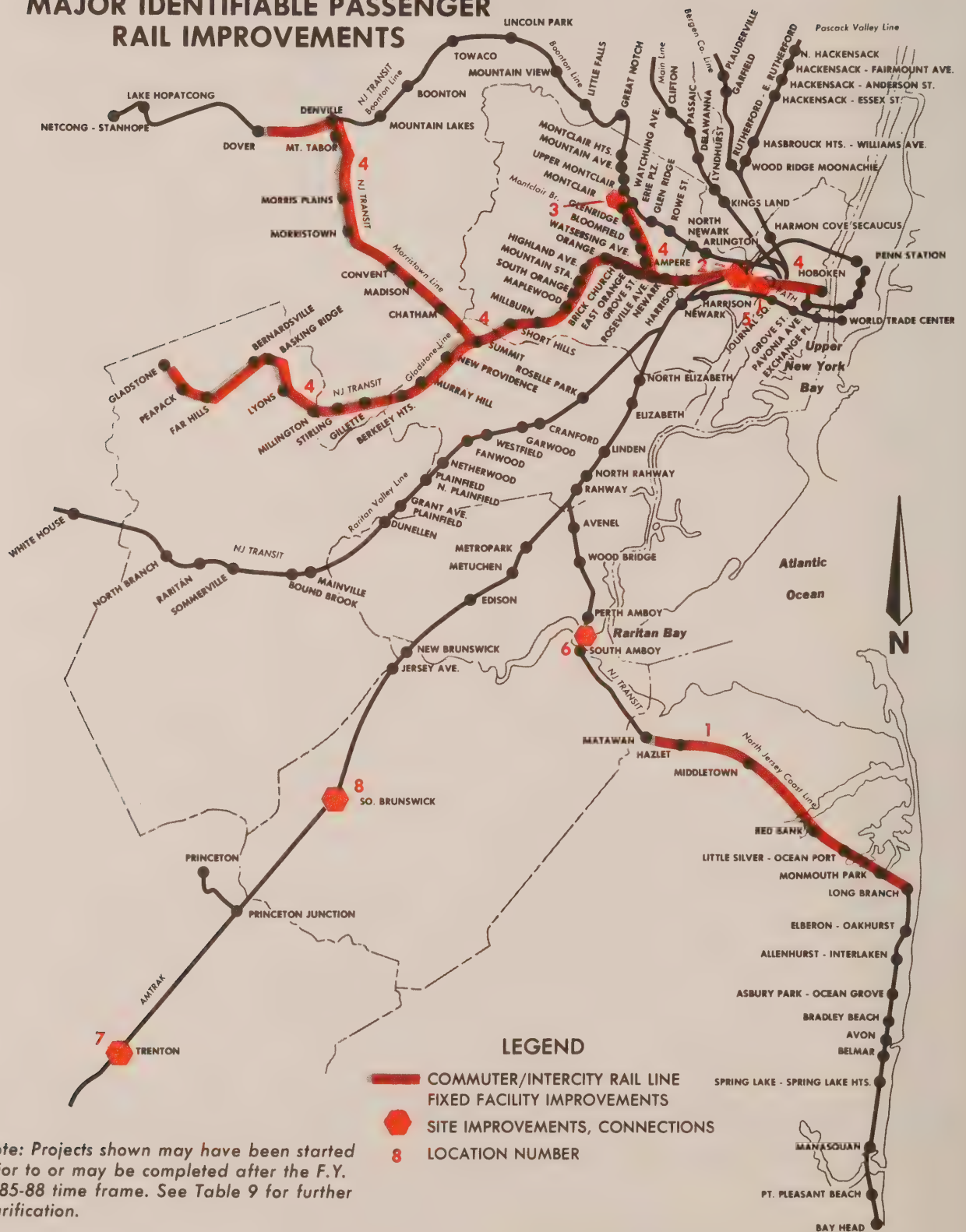
**TABLE 9 (CONT'D)**  
**SHORT-RANGE PLAN FOR PUBLIC TRANSPORTATION**

LOC. NO.	IMPROVEMENT TYPE	PRIOR YEAR FUNDING	TOTAL F.Y. 1985-1988	F.Y. 1989 & BEYOND
<b>VII. Bus Support Vehicles and Equip.</b>				
-	Non-Revenue Rolling Stock	3.9	4	3
-	Automatic Vehicle Monitoring	24.6	11	- - -
-	Automatic Passenger Counting	- - -	11	- - -
-	Fare Collection System	2.8	6	- - -
-	Electronic Data Processing	7.6	3	- - -
	Subtotal	38.9	35	
<b>VIII. Bus Rolling Stock</b>				
-	Bus Purchase	181.0	121	103
-	Private Carrier Program	4.8	48	48
-	Specialized Services	4.4	10	12
	Subtotal	190.2	179	
<b>IX. Bus Passenger Facilities</b>				
-	Park and Ride	6.3	15	12
-	Passenger Facilities	1.4	7	6
-	Signs	.9	8	4
-	Shelters	4.6	4	4
	Subtotal	13.2	34	
<b>X. Project Development Studies</b>				
		1.1	4	4

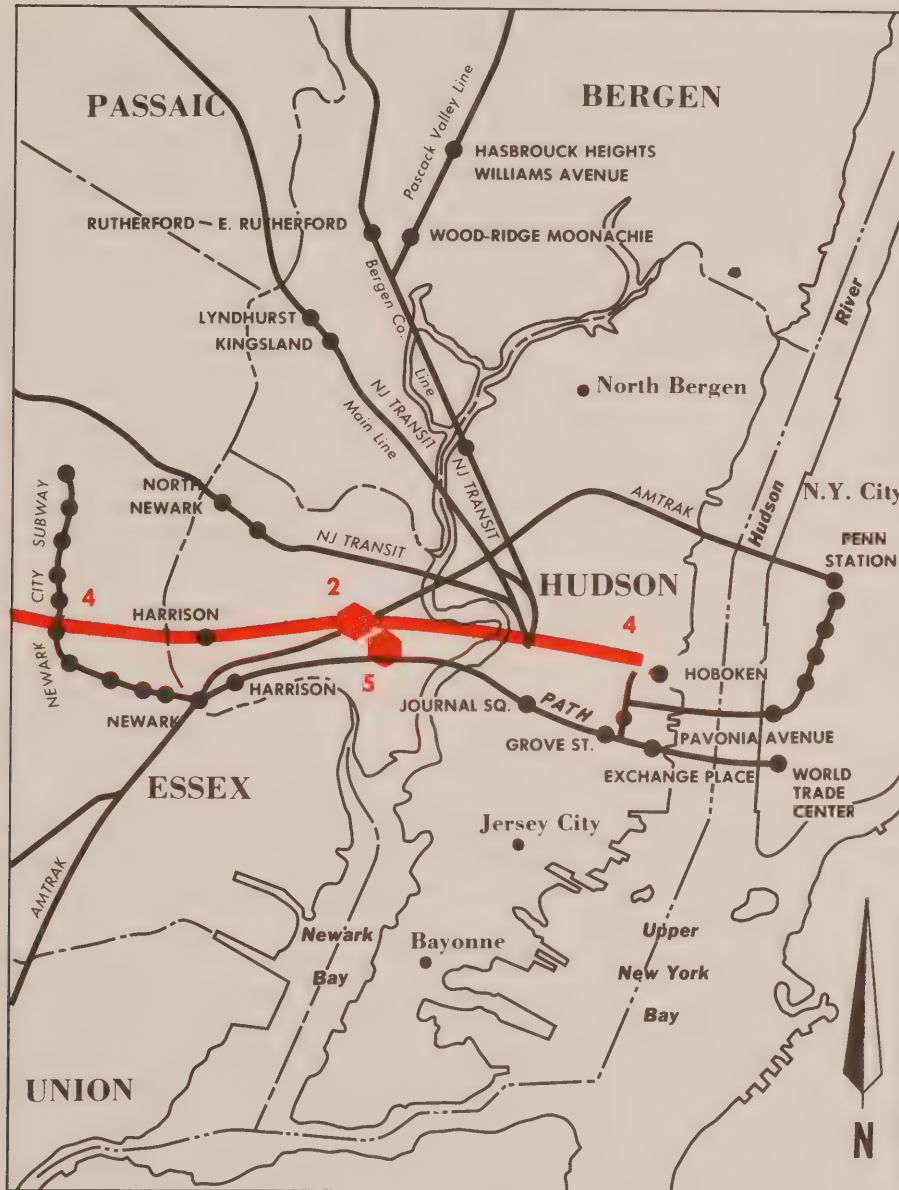
*Note: All amounts are in millions of current dollars. For the period F.Y. 1985-1988, all amounts have been rounded to the nearest million dollars.*

*Location number is keyed to Figure 15.*

**FIGURE 15-1**  
**SHORT RANGE PLAN**  
**MAJOR IDENTIFIABLE PASSENGER**  
**RAIL IMPROVEMENTS**



**FIGURE 15-2**  
**SHORT RANGE PLAN**  
**MAJOR IDENTIFIABLE PASSENGER**  
**RAIL IMPROVEMENTS**



**LEGEND**

- COMMUTER/INTERCITY RAIL LINE
- ◆ FIXED FACILITY IMPROVEMENTS
- ◆ SITE IMPROVEMENTS, CONNECTIONS
- 7 LOCATION NUMBER

*Note: Projects shown may have been started prior to or may be completed after the F.Y. 1985-88 time frame. See Table 9 for further clarification.*



## b. State Participating Highway Projects

Projects in the state participating highway capital program have been categorized by improvement type. As described below, six (6) categories of improvements are listed:

- **Completion of the Interstate System** - This category consists of the completion of the essential missing links in the Interstate System. The construction will be on new alignment, and entails complete control of access at all points along the right-of-way, a physical separation between opposing lanes of traffic and the grade separation of all interchanges.
- **Other Major Construction on New Alignment** - These facilities are essential missing links in the state's non-Interstate Highway System. These facilities are constructed on new alignment and generally entail complete control of access, physical separation of opposing traffic lanes and grade separated interchanges.
- **Major Reconstruction of Existing Facilities** - These improvements entail the major reconstruction of an existing facility to increase carrying capacity and/or to improve safety characteristics. The improvements apply to both Interstate and non-Interstate facilities and include "dualizations" with additional lanes, major widenings and major spot improvements such as grade separated interchanges and major bridge replacements or repairs.
- **Minor Reconstruction and Safety** - These improvements are mostly safety type improvements. Examples include: minor widenings that only increase widths of existing lanes or shoulders, barrier curbs, major resurfacing, jughandles, traffic circle cut-throughs, bridge rehabilitation (including structural repairs and deck replacement), and other safety related projects including those which improve traffic flow.
- **Resurfacing Program** - For reasons enumerated in Section IV.: Major Issues, maintenance of the state's highway system is a paramount concern. As will be noted in the longer range section, this category of problems will be developed annually. Consequently, beyond the F.Y. 1985 element, this type of improvement is shown as a categorical program.

Table 10 indicates those projects which have been identified to date as being eligible for inclusion in the F.Y. 1985 element.

- **Miscellaneous** - All remaining projects are consolidated in this category. These include non-routine resurfacings, noise barriers, rest areas, park-and-ride facilities, minor bridge rehabilitations, landscaping, drainage and minor safety improvements such as signs, lighting, fencing and minor intersection improvements.

The short-range plan for state participating highway improvements is summarized in Table 11 and listed in Table 12. As with public transit, dollar amounts are shown for fiscal year 1989 (and beyond) where appropriate to indicate the total costs of projects funded partially during F.Y. 1985-1988 as well as to denote the cost of projects started during this time period. These new projects will receive high priority for funding after F.Y. 1988. Major projects are mapped in Figure 16.

**TABLE 10**  
**ELIGIBLE STATE HIGHWAY RESURFACING PROJECTS**  
**FOR FISCAL YEAR 1985**

<b>ROUTE</b>	<b>LIMITS</b>	<b>COUNTY</b>
1, 1 Alt.	Shabacunk Cr. to Rt. I-295, Lawrence Twp.	Mercer
7	NJ Tpke. to Passaic River	Hudson
7	Pershing Ave. to Orange St., Clifton & Nutley	Passaic
9	Co. Rt. 585 to Fox Run Rd., Middle Twp.	Cape May
9	Rt. 109 to Colonial Ave., Lower & Middle Twps.	Cape May
9	School House Dr. to Doughty Rd., Linwood to Pleasantville	Atlantic
9	Old York Rd. to GSP, Galloway Twp. & Port Republic	Atlantic
9NB	Vicinity Rt. 33 Circle to Schibanoff Rd., Freehold Twp.	Monmouth
9W	West St. to Palisades Ave., Fort Lee & Englewood Cliffs	Bergen
10WB	Ledgewood Circle to Co. Rt. 617 (Main St.), Roxbury Twp.	Morris
10	W. Northfield Ave. to Ellison Ave., Livingston Twp. & W. Orange	Essex
12	Mine St. to Rt. 202, Raritan Twp. & Flemington	Hunterdon
17	Rt. 7 to Rt. 3 Service Rd. & Henry St. to Williams Ave., No. Arlington & Rutherford, Hasbrouck Hts.	Bergen
21F	Ramps in vicinity of Hope Ave., Passaic City	Passaic
22	Springfield Ave. to Wewanna Ave., Springfield & Union Twps.	Union
24	Madison Ave. to Passaic River, Madison & Chatham	Morris
27	Vineyard Rd. to Green St. Metuchen to Woodbridge Twp.	Middlesex
27	Rt. 35 to Essex Co. Line, Rahway to Elizabeth	Union
28	Rt. 206 to Grove St., Sommerville	Somerset
29	Brookville Ck. to Wickecheoke Ck., Stockton	Hunterdon
30	Fairmount Ave. to Collingswood Circle, Stratford to Collingswood	Camden
30	Airport Circle to Bank St., Pennsauken Twp. & Camden	Camden
30	Co. Rt. 718 to Lindenwold/Stratford Corp. Line., Lindenwold	Camden

**TABLE 10 (CONT'D)**

<b>ROUTE</b>	<b>LIMITS</b>	<b>COUNTY</b>
30	Atlantic Co./Camden Co. Line to Walker Rd., Winslow Twp.	Camden
30	U.S. 206 to Atlantic Co./Camden Co. Line, Hammonton	Atlantic
33	Vic Greenwood Ave. Circle, Trenton	Mercer
33EB	Vicinity of Mercer Co./Middlesex Co. Line	Mercer & Middlesex
33EB	Millstone Rd. to Woodward Rd., Millstone & Manalapan Twp.	Monmouth
33	Rt. 34 Circle to Rt. 66, Wall Twp., & Tinton Falls Boro.	Monmouth
35SB	Washington Ave. to Curtis Pt. Rd., Lavallette Boro, Dover & Brick Twps.	Ocean
35	Wall Twp./Belmar Boro. Corp. Line to Briarwood Rd., Belmar Boro.	Monmouth
35	Smith St. to Jansen St., Perth Amboy & Woodbridge Twp.	Middlesex
36	Rumson Rd. to Navesink Ave., Sea Bright to Middletown Twp.	Monmouth
36	Compton Ck. to Rose Lane, Middletown & Hazlet Twps.	Monmouth
38	Airport Circle to Church Rd., Pennsauken & Cherry Hill Twps.	Camden
40	Blue Bell Rd. to Co. Rt. 557, Buena Boro.	Gloucester
40	Vic. of Co. Rt. 557/Tuckahoe Rd. to Vic. of Rt. 54, Buena Boro.	Atlantic
40	Rt. 50 & Co. Rt. 559 to Old Egg Harbor Rd., Hamilton Twp.	Atlantic
40&322	Athens Ave. to Inside Thorofare, Egg Harbor Twp. & Atlantic City	Atlantic
44	Clonmell Ck. to Pine St., Greenwich Twp. & Paulsboro	Gloucester
44	Rt. 130 to Co. Rt. 551, Logan & Greenwich Twps.	Gloucester
46	Vic. of Regina Lane to Vic. of Terrace Hill Rd., Independence Twp.	Warren
47	Co. Rt. 670/Hunters Mill Rd. to Fries Mill Rd., Maurice River Twp.	Cumberland
49	No. of Freas Rd. to W. Broadway, Pennsville Twp. & Salem City	Salem
49	Hollyland Rd. to Co. Rt. 646, Millville, & Maurice River Twp.	Cumberland
50	Cedar Swamp Ck. to Co. Rt. 585, Upper Twp.	Cape May



**TABLE 10 (CONT'D)**

<b>ROUTE</b>	<b>LIMITS</b>	<b>COUNTY</b>
50	Vic. of Gibson's Ck. to Vic. of Honest John Rd., Estell Manor City	Atlantic
57	Br. of Musconetcong River to Pennwell Rd., Mansfield Twp.	Warren
57	Pohatcong Ck. to Rt. 31, Washington Twp. & Washington Boro.	Warren
63	91st. St. to Park Ave. & Morningside Lane to 8th St., North Bergen Twp., Fairview & Palisades Park	Bergen
70	Vic. of Co. Rt. 539 to Oak St., Manchester Twp. & Lakehurst Boro.	Ocean
71	14th St. to Shark River, Belmar Boro.	Monmouth
77	Rt. 56 (Landis Ave.) to Alloway/Upper Pittsgrove Twps. Corp. Line, Upper Deerfield & Alloway Twps.	Cumberland
77	Rt. 49 to No. of Mulford Dr., Bridgeton	Cumberland
77	Rt. 40 Circle to Vic. of Kettle Run, Upper Pittsgrove Twp.	Salem
77	Vic. of Kettle Run to Branch of Racoon Ck. Upper Pittsgrove Twp. & Elk Twp.	Gloucester & Salem
78EB	Vic. of Osborn Terrace to Vic. of Elizabeth Ave., Newark	Essex
79	No. of Harnley Rd. to Rt. 34, Marlboro Twp. & Matawan	Monmouth
80	So. of Riverview Dr. to Glover Ave., Totowa & W. Paterson	Passaic
91	Vic. of Van Dyke Rd., New Brunswick	Middlesex
94	Vic. of Hilltop Rd. to Vic. of Summit Ave., Fredon Twp. & Newton	Sussex
109	Cape May City/Lower Twp. Corp. Line to Rt. 9, Lower Twp.	Cape May
130	Browning Lane to Route 30, Brooklawn to Collingswood	Camden
130	Bridgeboro Rd. to Levitt Pkwy. & Beverly Rd. to Assiscunk Ck., Edgewater Park Twp. & Burlington	Burlington
130NB	Vic. of NJ Tpke. Ext. of Vic. of Hornberger Ave., Florence Twp.	Burlington
130SB	Rt. 206 to Rt. 156, Bordentown Twp.	Burlington
156	Rt. 130 to Rt. 130 (entire length), Hamilton Twp.	Mercer
161	Allwood Rd. to Van Houten Ave., Clifton	Passaic
168	Third Ave. to No. Merchant St., Runnemede to Haddon Twp.	Camden
169	So. of Prospect Ave. to No. of Pulaski St., Bayonne	Hudson

**TABLE 10 (CONT'D)**

<b>ROUTE</b>	<b>LIMITS</b>	<b>COUNTY</b>
170	Rt. 206 to Crafts Ck ., Mansfield Twp.	Burlington
173	Co. 643 to Strutz Rd. Bethlehem Twp.	Hunterdon
175	Vic. of Wilburtha Rd. to Vic. of D&R Canal, Ewing Twp.	Mercer
179	Lambert Lane to Rt. 165, Lambertville	Hunterdon
195EB	Vic. of Yardville-Hamilton Sq. Rd. to Vic. of Richardson Rd., Hamilton Twp.	Mercer
202	Church St. to Doughty St., Bernardsville to Morristown	Somerset
206	Atlantic Co./Burlington Co. Line to Fawn Lake Rd., Shamong Twp.	Burlington
439	Rt. I-278 to Baily Ave., Elizabeth	Union

**TABLE 11**  
**SHORT-RANGE PLAN**  
**STATE PARTICIPATING HIGHWAY PROJECTS**  
**(F.Y. 1985 - 88)**  
**SUMMARY BY IMPROVEMENT TYPE**

<b>IMPROVEMENT TYPE</b>	<b>TOTAL F.Y. 1985-1988</b>
Completion of Interstate System	606
Other Major Construction on New Alignment	463
Major Reconstruction of Existing Facilities	749
Minor Reconstruction and Safety Improvements	304
Resurfacing Program	100
Miscellaneous	126

*Note: All amounts are in millions of current dollars and  
have been rounded to the nearest million dollars.*

**TABLE 12**  
**SHORT-RANGE PLAN-STATE PARTICIPATING HIGHWAY PROJECTS (FY 1985-88)**  
**COMPLETION OF INTERSTATE SYSTEM**

Loc. No.	Route	Description	County	F.Y. 85	F.Y. 86	F.Y. 87	F.Y. 88	Total F.Y. 1985-88	F.Y. 89 And Beyond
1	78	Baltusrol Rd. to Springfield Ave.	Union	(C)	---	---	---	15	---
2	78	Delaware River to Rt. 22	Warren	(U&C)	(C)	---	---	63	---
3	287	Rt. 202 to NYS Line	Passaic Bergen Morris	(C)	(C)	(C)	(C)	344	11(C)
4	295	Rt. 130 to Delaware St.	Gloucester	(R)	(C)	---	---	40	---
5	295	Rt. 130 to Rt. I-195	Burlington Mercer	---	(C)	(C)	---	71	---
6	295	Rt. I-295/195 Interchange	Mercer	---	(C)	---	---	54	---
7	295	Rt. I-195 to Arena Drive	Mercer	(C)	---	---	---	19	---
Subtotal								606	

**OTHER MAJOR CONSTRUCTION ON NEW ALIGNMENT**

1	17	Vicinity of Rt. I-280 to Rt. 3	Bergen Hudson	---	---	---	(E)	5	67(R&C)
2	18F	Garden State Pkwy. to Deal Rd.	Monmouth	(E)	(C)	(C)	---	62	---
3	20	Rt. I-80 to Paterson CBD	Passaic	(E)	(R)	(C)	(C)	18	---
4	21F	Monroe St. to Rt. I-80	Passaic	---	---	---	(E)	5	50(C)
5	24F	Rt. I-287 to Passaic River	Morris	(R)	(C)	(C)	---	60	---
6	29F/129	Rt. I-195 to Lalor St.	Mercer	(E)	---	(C)	---	21	---
7	33F	Rt. 79 to Rt. 33	Monmouth	(E)	(C)	---	---	13	15(C)
8	40	Woodstown Bypass	Salem	---	(E)	(R)	---	1	7(C)
9	55F	Rt. 40 to Tylers Mill Rd.	Gloucester	(C)	(U&C)	(C)	---	89	---
10	90F	Haddonfield Rd. to Rt. 73	Camden	(C)	---	---	---	24	---
11	92F	Rt. 206 to Vicinity of NJ Tpke.	Mercer Middlesex Somerset	(E)	(E)	---	(R)	29	70(C)
12	129	Rt. 1 to Lalor Street	Mercer	(E)	---	---	---	1	32(C)
13	169	30th St. to Harbor Dr.	Hudson	(R)	---	(C)	---	19	---
14	169	Margaret St. to Avenue C	Hudson	(U&C)	(C)	---	---	31	---
15	169	JFK Blvd. to Rt. 185	Hudson	---	(C)	---	---	21	---
16	185	Harbor Dr. to Linden Ave.	Hudson	(U&C)	---	---	---	22	---
17		Somerset Expressway, Rt. 206 to Rt. I-287	Somerset	(E)	(E)	---	---	5	70(R&C)
18		Carteret Industrial Rd.	Middlesex	(R)	(C)	---	---	8	---
19		Eisenhower Parkway	Essex	---	---	---	(C)	20	32(C)
20		Sparta-Munson Bypass	Sussex	(R)	(C)	---	---	9	---
Subtotal								463	

**Notes:**

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3. During the life of this plan there may be refinements that will alter project costs or scheduling of type of work.
4. Location number is keyed to Figure 16.

**Legend**

- E Engineering
- U Utilities
- R Right of Way
- C Construction



# MAJOR RECONSTRUCTION OF EXISTING FACILITIES

Loc. No.	Rt.	Description	County	F.Y. 85	F.Y. 86	F.Y. 87	F.Y. 88	Total F.Y. 1985-88	F.Y. 89 And Beyond
1	1	Trenton to New Brunswick, widening and intersection improvements	Mercer Middlesex	(R)	(C)	(C)	(C)	60	To be deter- mined
2	1&9	Plerson Ave. to E. Scott Ave., widening	Middlesex Union	(E)	(E)	(R)	---	13	41(C)
3	1&9	Tonnelle Ave. to Rt. 3, widening	Hudson	---	(R)	---	(C)	25	---
4	1&9	Viaduct over Elizabeth River, Study to widen	Union	(E)	(E)	---	(E)	3	To be deter- mined
5	1&9	SB over Waverly Yards, bridge replacement	Essex	(E)	---	(C)	---	45	---
6	1&9T	Over St. Pauls Ave., bridge rehab.	Hudson	---	---	(E)	---	1	15(C)
7	3	Over Berry's Creek, bridge reconstruction	Bergen	(E)	---	---	---	---	18(E&C)
8	4	Hacksack River to Rt. I-95, widening & imprv. to Rts. 4 & 17 Interchange	Bergen	(C)	---	(R)	---	9	20(C)
9	7	Over Hacksack River, bridge rehab.	Hudson	---	---	---	(E)	2	27(C)
10	9	Ernst Rd., intersection impr.	Middlesex	---	---	(R)	(C)	15	---
11	9	Over Bass River, bridge repl.	Burlington	(E)	---	---	(E)	2	15(C)
12	9	Over Raritan River, bridge rehab., deck repl. & substructure impr.	Middlesex	---	---	---	(C)	11	---
13	9	Over Nacote Creek, bridge repl.	Atlantic	(E)	---	(R&C)	---	8	---
14	10	Ledgewood Circle to Franklin Rd. & Rt. 53 to Johnson Rd., widening, jughandles & barrier curb	Morris	(E)	---	(R)	---	10	30(R&C)
15	10	At Ridgedale Ave., intersection impr.	Morris	(E)	---	---	(C)	5	---
16	17	Essex St. to Rt. 4, widening	Bergen	---	---	---	---	---	24(R&C)
17	17	Linwood Ave. to Rt. I-287, widening, resurfacing, barrier curb	Bergen	(E,R&C)	(C)	---	---	20	---
18	17	Race Track Rd., interchange impr.	Bergen	---	---	---	---	---	6(R&C)
19	17	Lake St., interchange impr.	Bergen	(R)	(E&C)	---	---	4	10(R&C)
20	18	Structure over Lawrence Brook, rehabilitation & new parallel structure	Middlesex	(E)	---	---	---	---	To be deter- mined
21	18	Over Main St., bridge repl.	Middlesex	(E)	---	---	---	---	11(E&C)
22	18	River Rd. to Rt. I-287	Middlesex	(E)	---	(R)	---	4	8(C)
23	21	Rt. 21/78 & Conrail, bridge rehab.	Essex	(E)	---	---	(E)	2	17(C)

## Notes:

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## Legend

E Engineering  
U Utilities  
R Right of Way  
C Construction

# MAJOR RECONSTRUCTION OF EXISTING FACILITIES (CONT'D)

Loc. No.	Route	Description	County	F.Y. 85	F.Y. 86	F.Y. 87	F.Y. 88	Total F.Y. 1985-88	F.Y. 89 And Beyond
24	23	New York Ave. to Maple Lake Rd., dualization	Passaic	(R&C)	(R)	---	(C)	18	---
25	30 130	Collingswood Circle to Airport Circle, widening & circle modifications	Camden	(E)	(R)	(C)	---	13	---
26	30	Over Cooper River, bridge repl.	Camden	(E)	---	---	(E)	1	9(C)
27	31	Flemington Circle to Rt. I-78, dualization	Hunterdon	(E)	(R)	---	(C)	50	---
28	33	Rt. 35 to Rt. 71, widening	Monmouth	(R)	(C)	---	---	2	---
29	33	Barlow St. & Greenwood Ave. Circles, Trenton; circle modifications	Mercer	(E)	---	---	---	1	4(C)
30	35	Over Matawan Creek, bridge repl.	Monmouth	---	(R&C)	---	---	6	---
31	35 36	Eatontown Circle, circle cut-thru	Monmouth	(R)	(C)	---	---	4	---
32	37	Rt. 70 to Rt. 9, dualization	Ocean	(E)	(E&R)	(R&C)	(R&C)	12	10(C)
33	38	NJ Tpke. to Pemberton Rd., dualization	Burlington	(R)	(C)	---	---	27	---
34	41	Evesham Rd. to Woodbury-Almonessen Rd., dualization	Gloucester	(R)	(C)	---	---	9	---
35	42	Woodbury-Clements Bridge Rd. to Rt. I-295, widening	Camden Gloucester	(E)	---	---	---	---	8(C)
36	46	Lodi Traffic Circle, circle cut-thru	Bergen	(E)	(R)	(C)	---	2	---
37	46	Dover Viaduct over Rockaway River and Conrail, bridge rehab.	Morris	---	---	(C)	---	12	---
38	56	Landis Ave. at Rt. 77, intersection improvement	Cumberland	(E)	---	(R)	(C)	3	---
39	70	Rt. 38 to Rt. 73; widening, resurfacing & jughandles	Camden	(E)	(E)	(R)	(C)	15	---
40	70	Rt. I-295 to Springdale Rd., Cherry Hill; widening, resurfacing & jughandles	Camden	(E)	---	(R)	(C)	5	---
41	70	Intersection at Grove St.-Stoys Landing Rd. (Racetrack Circle), circle cut-thru	Camden	(E)	---	(R)	(C)	5	---
42	70	Rt. 9 to Chambers Bridge Rd., widening, resurfacing, barrier curb	Ocean	(R)	(C)	(C)	---	19	---
43	70	Intersection at Rt. 88 (Laurelton Circle), circle cut-thru	Ocean	(C)	---	---	---	3	---
44	70 41	Ellisburg Circle, cut-thru & partial improvements to Rt. 70	Camden	(E)	---	---	---	1	4(C)

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## Legend

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 C - Construction

# MAJOR RECONSTRUCTION OF EXISTING FACILITIES (CONT'D)

Loc. No.	Route	Description	County	F.Y. 85	F.Y. 86	F.Y. 87	F.Y. 88	Total F.Y. 1985-88	F.Y. 89 And Beyond
45	71	Over Deal Lake, bridge repl.	Monmouth	(E)	---	---	---	---	7(E&C)
46	73	Over Rt. 30, bridge repl.	Camden	---	(C)	---	---	5	---
47	78	Intersection at Rt. 21, interchange construction	Essex	(E)	---	---	---	1	9(C)
48	80	Rt. 15 to Parsippany Rd., widening, resurfacing, bridge deck rehab. & noise barrier	Morris	(E)	(E)	(C)	---	29	---
49	80	Riverview Dr. to Teaneck Rd., bridge repl., bridge deck protective systems & resurfacing	Passaic Bergen	---	(C)	(C)	---	29	---
50	82	Over Rahway River, bridge replacement	Union	---	---	---	---	---	6(C)
51	95 295	Rt. 29 to Scotch Rd. & East of Rt. 31, widening	Mercer	---	---	(C)	---	3	---
52	130	Assiscunk Cr. to Rt. 206, widening & resurfacing	Burlington	(E)	(R)	---	(C)	10	13(R&C)
53	147	Rt. 9 to New Jersey Ave., widening	Cape May	(E)	(R)	(C)	---	63	---
54	152	Somers Point to Longport, bridge replacement	Atlantic	(R)	(U&C)	---	---	39	---
55	206	Co. Rt. 518 to Somerville Circle, dualization	Somerset	(E)	(E)	(R&C)	(C)	40	32(C)
56	206	Over Stony Brook, bridge replacement	Mercer	(E)	---	---	---	---	6(E&C)
57	280	Connector Ramp to Rt. 21	Essex	(E)	---	---	(C)	5	---
58	287	Rt. I-78 to Morristown, widening	Morris Somerset	---	(E)	---	(C)	20	---
59	287	At Possumtown Rd., So. Randolph Rd., River Rd. & New Durham Rd., interchange impr.	Middlesex	(E)	---	(E)	---	1	11(R&C)
60	295	Delaware St. to Repaupo Rd., widening	Gloucester	(C)	---	---	---	22	---
61	322	Mechanics St. to Rt. I-295, widening	Gloucester	---	---	---	(R&C)	9	---
62	444	Wood Ave. Interchange, ramp addition	Middlesex	(R&C)	---	---	---	5	---
63	676	No. Br. Newton Ck. to Rt. I-76, widening	Camden	(E)	---	(C)	---	3	---
64		Co. Rt. 522, South Brunswick	Middlesex	(R)	(C)	---	---	8	6(C)
65		Jackson St. Bridge rehabilitation	Essex Hudson	---	(C)	---	---	8	---
66		Princeton-Hightstown Rd., widening & intersection improvements	Mercer	---	(C)	---	---	2	---
Subtotal								749	

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## Legend

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# MINOR RECONSTRUCTION AND SAFETY IMPROVEMENTS

Loc. No.	Route	Description	County	F.Y. 85	F.Y. 86	F.Y. 87	F.Y. 88	Total F.Y. 1985-88	F.Y. 89 And Beyond
1	1&9	Milton St. to North Ave., resurfacing	Union	---	(C)	---	---	8	---
2	1&9 46	Overpeck Ck. to Fletcher Ave., resurfacing	Bergen	---	(C)	---	---	2	---
3	1&9 46	E. B. over Rt. 4 ramps, bridge rehab.	Bergen	(E)	---	---	(E)	1	4(C)
4	1&9	Over Rt. 35, deck repl. & impr. superstructure	Middlesex	(E)	---	(C)	---	2	---
5	1&9	Over 11 structures, deck repl.	Essex	---	(R)	---	(C)	20	---
6	1&9	Underpass at Conrail (CRRNJ), improve vertical clearance	Union	---	(C)	---	---	1	---
7	1B	E.B. over 12th St. Viaduct, bridge rehab.	Hudson	(E)	(E)	(C)	---	5	---
8	1&9T	Hackensack River to Pulaski Skyway, resurfacing & safety	Hudson	---	(C)	---	---	2	---
9	1&9T	Pulaski Skyway to Passaic River Bridge, interchange modifi- cations at NJ Tpke. Interch. 15E & bridge rehab.	Essex	(C)	---	---	---	8	---
10	4	Rt. 208 to Hackensack River, and Rt. 4 E.B. to Cedar Lane, connector rd. & structures	Bergen	---	(R&C)	(C)	(C)	8	---
11	4	Over Kinderkamack Rd., brdg. rehab. & deck repl.	Bergen	(E)	---	---	---	---	6(C)
12	4	Over Passaic River and Rt. 20, bridge rehab.	Passaic Bergen	(E)	(C)	---	---	2	---
13	7	Over Passaic River, bridge rehab.	Bergen Essex	(C)	---	---	---	1	---
14	7	Over Hackensack River, superstructure repairs	Hudson	---	(C)	---	---	4	---
15	9, 40, 322	Doughty Rd. Intersection realignment of "S" curve	Atlantic	---	(R&C)	---	---	2	---
16	15	Over Paulins Kill, brdg. repl.	Sussex	(E)	---	(C)	---	1	---
17	17	Under Terrace Ave., rehab. of superstructure	Bergen	---	(C)	---	---	2	---
18	18	Rt. 1 west to New Brunswick, safety improvements	Middlesex	(E)	---	(C)	---	2	---
19	21	Clay St. to Raymond Blvd., reversible lane & minor widening	Essex	(R)	(C)	---	---	2	---
20	22	Reading Rd. & Orr Dr., intersection improvements	Somerset	(E)	(R)	---	(C)	2	---
21	22	Rt. I-287 to Willow Ave., resurfacing & reconstruction	Somerset	(E)	---	(C)	---	2	---

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## Legend

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C - Construction

# MINOR RECONSTRUCTION AND SAFETY IMPROVEMENTS (CONT'D)

Loc. No.	Route	Description	County	F.Y. 85	F.Y. 86	F.Y. 87	F.Y. 88	Total F.Y. 1985-88	F.Y. 89 And Beyond
22	23	Over Ben Franklin Lake, bridge repl.	Sussex	(E)	(E)	(C)	---	1	---
23	23	Over Passaic River, deck repl.	Passaic	(E)	(E)	(C)	---	1	---
24	23	N.B. over Pequannock River bridge repl.	Passaic	(E)	(E)	---	(C)	1	---
25	27	Ramps at Rt. 444, channelization & signalization	Middlesex	(E)	---	---	(C)	1	---
26	27	Finnegans Lane & Henderson Rd., intersection improvements	Middlesex Somerset	(C)	---	---	---	1	---
27	27	Over Raritan River, bridge rehab. & redecking	Middlesex	(C)	---	---	---	1	---
28	27	Over Harry's Brook, bridge rehab.	Mercer	(E)	(E)	(C)	---	1	---
29	30	G.S.P. to Camden County Line, safety impr.	Atlantic	(E)	---	---	---	---	34(C)
30	30, 40, 322	Atlantic City TSM Imprvmnts.	Atlantic	(E)	(R&C)	---	---	12	10(C)
31	30	Clementon Rd., intersection impr.	Camden	(C)	---	---	---	1	---
32	30	Over Garrett's Ditch, superstructure repl.	Atlantic	---	(C)	---	---	1	---
33	31	Clinton-Clinton Twp. Line to Holstead St., safety impr.	Hunterdon	(E)	---	---	(C)	5	---
34	34	Over Leffert's Lake, bridge repl.	Monmouth	(E)	(E)	(C)	---	3	---
35	35	Victory Bridge to Rt. 440, milling and resurfacing	Middlesex	(E)	---	(C)	---	1	---
36	35	Clifford Ave. to Cheesequake Ck., widening & barrier curb	Monmouth Middlesex	(E)	---	---	---	---	5(C)
37	35	Over Raritan River, bridge rehab.	Middlesex	(E)	(E)	---	---	1	5(C)
38	35	Over No. Channel of Shark Rvr., bridge rehab.	Monmouth	(E)	(E)	---	(E)	---	1(C)
39	35	Over N.Y. & L.B. R.R., bridge rehab.	Middlesex	(E)	(E)	---	(C)	1	---
40	35	Over Shark River, bridge rehab.	Monmouth	(E)	(E)	---	---	---	1(C)
41	36	Over Shrewsbury River, bridge rehab.	Monmouth	(E)	---	---	(E)	2	5(C)
42	37	G.S.P. to Hospital Dr., widening & jughandles	Ocean	(R)	---	(C)	---	2	---
43	40, 322	Cardiff Circle, safety improvements	Atlantic	(E)	---	(C)	---	3	---
44	40, 322	Over Great, Beach and Inside Thoroughfares, bridge rehab.	Atlantic	---	---	---	(C)	5	---
45	40, 9	Rt. 9 & Bethel Rd., Rt. 40 & Noah's Rd., Rt. 40 & Doughty Rd., intersection improvements	Atlantic	---	(R&C)	---	---	2	---

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U = Utilities  
R = Right of Way  
C = Construction

# MINOR RECONSTRUCTION AND SAFETY IMPROVEMENTS (CONT'D)

Loc. No.	Route	Description	County	F.Y. 85	F.Y. 86	F.Y. 87	F.Y. 88	Total F.Y. 1985-88	F.Y. 89 And Beyond
46	41	Route 47 to County House Rd., widening & resurfacing	Gloucester	(E)	---	---	(C)	1	---
47	44	Over PRSL R.R., bridge rehab.	Gloucester	(E)	---	---	(C)	4	---
48	45	Bridge over Colliers Run, Maddington Ck., bridge repl.	Salem	(E)	---	(C)	---	4	---
49	45	Over Majors run, brdg. rehab.	Salem	(E)	---	(C)	---	1	---
50	46	Riverview Rd. & Minisink Rd., intersection improvements	Passaic	---	(E)	---	(R)	2	5(C)
51	46	New Rd., intersection imprvmnt.	Morris	(R)	(C)	---	---	1	---
52	46	Baldwin Rd., jughandles	Morris	(E)	---	---	(C)	1	---
53	46	Over Rockaway River, Blackwell St., Rt. 15 & CRRNJ, bridge rehab.	Morris	---	(E)	---	(C)	13	---
54	46	Over Passaic River, brdg. rehab.	Passaic Bergen	---	(E)	---	(C)	6	---
55	46	Over Riverview Dr., bridg. rehab.	Passaic	---	(E)	---	(C)	3	---
56	47	At Rt. 40, Rt. 322, Pitman-Glassboro Line to Walnut Ave., County House Rd. to Rt. 41, at Caulfield-Deptford Ave., intersection improvements	Gloucester	(E)	---	(C)	---	2	---
57	47	Cape May County Line to Manumuskin Ck., resurfacing	Cumberland	(E)	---	(C)	---	2	---
58	47	Hand Ave. to Goshen Rd., brdg. repl. & resurf.	Cape May	(R)	(C)	---	---	5	---
59	47	Chestnut St. to Rt. 55F, resurfacing & drainage	Cumberland	---	(C)	---	---	3	---
60	47	Over Grassy Sound, bridge rehab.	Cape May	(E)	(E)	(C)	---	1	---
61	50	Over NJ TRANSIT, brdg. rehab.	Cape May	(E)	(E)	(C)	---	3	---
62	57	Port Murray Rd. to Branch of Musconetcong, River, safety	Warren	(E)	(C)	---	---	1	---
63	71	Shark River to Sylvan Lake, resurfacing	Monmouth	---	(C)	---	---	1	---
64	73	Church Rd. to Baker Blvd. intersection improvements	Burlington	(E&C)	(R)	---	(C)	2	---
65	73	High St. to Rt. 38, resurf.	Burlington	(R)	(C)	---	---	4	---
66	77	Landis Ave. to Quinton Rd. resurf. & rehab.	Cumberland Salem	(E)	---	(C)	---	2	---
67	78	Allerton Rd. to Plainfield Ave., safety & reconstruction	Hunterdon Somerset	---	---	---	---	---	9(C)
68	78	Rattlesnake Rd., Burnt Mills Rd., Dead Rvr. Rd., increase vertical clearance	Somerset	(E)	---	---	---	---	To be determined

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## Legend

E Engineering  
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# MINOR RECONSTRUCTION AND SAFETY IMPROVEMENTS (CONT'D)

Loc. No.	Route	Description	County	F.Y. 85	F.Y. 86	F.Y. 87	F.Y. 88	Total F.Y. 1985-88	F.Y. 89 And Beyond
69	78	Beatty's Rd. to Rt. 31, various brdg. deck protective systems	Warren Hunterdon	(C)	---	---	---	6	---
70	78	Rattlesnake Rd., inter- section improvement	Somerset Hunterdon	(E&R)	(C)	---	---	2	---
71	78	Rt. I-287 to Plainfield Ave., resurfacing & deck repair	Somerset	(E)	(C)	---	---	11	---
72	78	Bloomsbury Rd. to Asbury Rd., Tunnel Rd. to Baptist Church Rd., resurfacing	Warren Hunterdon Union	(C)	---	---	---	8	---
73	78	Route 173 to Bloomsbury Rd., Musconetcong River to E. Tunnel Rd., Baptist Church Rd. to Jutland Rd., road and brdg. rehab.	Warren	---	---	---	---	---	13(C)
74	80	Rt. 46 to Fairfield Rd., resurfacing	Morris Essex	---	(C)	---	---	7	---
75	80	Rt. 94 to Mt. Hope- Rockaway Rd., road & bdg. rehab.	Warren Morris	(C)	(C)	---	---	22	---
76	80, 46, 280, 287	Rt. I-287 to New Rd., ramp improvements at interchanges	Morris	(E)	---	---	---	---	To be deter- mined
77	80	Intersection at Rt. 17, ramp addition	Bergen	---	---	---	---	---	2(C)
78	88	Over Metedeconk River, bdg. repl.	Ocean	(E&R)	(C)	---	---	2	---
79	94	Vicinity of Lasinski Rd., realignment & inter- section improvements	Sussex	(R&C)	---	---	---	1	---
80	95	Bear Tavern Rd. & Scotch Rd., increase vertical clearance	Mercer	(E)	---	---	---	---	To be deter- mined
81	130, 206	Municipal Dr. to Ward Ave., widening	Burlington	(R&C)	---	---	---	1	---
82	130	Rt. I-76 to Collingswood Cir., resurfacing & rehab.	Camden	(E)	---	(C)	---	8	---
83	130	Over PCRR at Rt. 33, bdg. repl.	Mercer	---	---	(C)	---	3	---
84	130, 33	Rt. 156 to Dutch Neck Rd., resurfacing & rehab.	Mercer	---	---	---	---	---	10(C)
85	183	Rt. 46 to Rt. 206, resurf. & rehab.	Morris Sussex	(E)	(R)	(C)	---	1	---
86	206	Ledgewood Rd. to Melville Pl., resurf. & safety impr.	Morris	(R)	(C)	---	---	7	---
87	208	Goffle Rd. to Cedar Hill Ave., barrier curb, shoulder reconstr. & resurf.	Bergen	---	(E)	---	(C)	3	---
88	208	Maple Ave. to Fairlawn Ave., elimination of fluctuating third lane	Bergen	(E)	(R)	(C)	---	2	---

## Notes:

1. This table generally excludes those projects included in the NJDOT F.Y. 1985 Construction Program that have been advertised for construction or are under construction. Several categorical and miscellaneous categories included in the construction program are excluded from this table as well.
2. All amounts are in millions of current dollars. All amounts have been rounded to the nearest million dollars and costs less than \$0.5 million are not shown.
3. During the life of this plan there may be refinements that will alter project costs or scheduling of type of work.
4. Location number is keyed to Figure 16.

## Legend

E - Engineering  
U - Utilities  
R - Right of Way  
C - Construction

# MINOR RECONSTRUCTION AND SAFETY IMPROVEMENTS (CONT'D)

Loc. No.	Route	Description	County	F.Y. 85	F.Y. 86	F.Y. 87	F.Y. 88	Total F.Y. 1985-88	F.Y. 89 And Beyond
89	280	Ramp revisions at G.S.P.	Essex	---	---	---	(C)	1	---
90	287	North Maple Ave. to Rt. 202, safety impr.	Somerset Morris	---	(C)	---	---	6	---
91	287	Garfield Ave. & Par-Troy Hills Rd., increase vertical clearance	Morris	(E)	---	---	---	---	To be deter- mined
92	295	Interchange with Rt. 48, ramp additions	Salem	(E)	(R)	---	---	---	3(C)
93	295	Over Rt. 45, PRSL and Broadway, rehab. of structures	Gloucester	(E)	---	---	---	---	4(C)
94	439	Elizabeth River, brdg. repl.	Union	(C)	---	---	---	1	---
95	444	G.S.P. Exit 8 to Exit 12, Middle Twp., conversion to controlled access roadway	Cape May	---	---	---	---	---	1(R&C)
96	495	Rt. 3 to Pleasant Ave., resurfacing	Hudson	(R)	(C)	---	---	2	---
97	495	Over Marginal St. & Park Ave., bridge rehab.	Hudson	---	(C)	---	---	7	---
98	495	Viaduct over Rt. 1&9, brdg. rehab.	Hudson	(E)	(C)	---	---	2	---
		D&R Canal Bridges #1, brdg. repl.	Middlesex Somerset	(E)	(E)	(C)	---	4	---
		D&R Canal Bridges #2, brdg. repl.	Mercer	(E)	(E)	---	(C)	4	---
		D&R Canal Bridges #3, brdg. repl.	Mercer	(E)	(E)	---	(C)	4	---
		Emergency Repairs to Bridges	Statewide	(E&C)	(E&C)	---	---	2	---
		Bridge Deck Repairs & Repl.	Statewide	(E&C)	(E&C)	---	---	2	---
		Subtotal						304	

## Notes:

1. This table generally excludes those projects included in the NJDOT F.Y. 1985 Construction Program that have been advertised for construction or are under construction. Several categorical and miscellaneous categories included in the construction program are excluded from this table as well.
2. All amounts are in millions of current dollars. All amounts have been rounded to the nearest million dollars and costs less than \$0.5 million are not shown.
3. During the life of this plan there may be refinements that will alter project costs or scheduling of type of work.
4. Location number is keyed to Figure 16.

## Legend

E - Engineering  
U - Utilities  
R - Right of Way  
C - Construction

# MISCELLANEOUS

Loc. No.	Route	Description	County	F.Y. 85	F.Y. 86	F.Y. 87	F.Y. 88	Total F.Y. 1985-88	F.Y. 89 And Beyond
9W		East Clinton Ave. to NY State Line, pavement reflectors, glare screening, resurfacing, guide rail, inter. impr.	Bergen	(C)	---	---	---	1	---
18		Church St. to Commercial Ave., coffer dams & canal restoration	Middlesex	---	(C)	---	---	2	---
21		N.B. Ramp to Rt. 3, skid resistant surface & guard rails	Passaic	(E)	---	(C)	---	1	---
29		Over Tributary of Delaware River, box culvert repair	Mercer	(E)	(E&C)	---	---	---	---
35		Drainage at Whale Creek	Middlesex	(E)	(C)	---	---	1	---
35		Victory Bridge, machinery repair	Middlesex	---	(C)	---	---	2	---
35		Smith St. to vicinity of Victory Plaza Circle, safety improvements on victory bridge	Middlesex	(C)	---	---	---	1	---
37		G.S.P. Exit Ramps, ramp modifications	Ocean	(E)	---	(C)	---	1	---
40		Vic. State Police Sta. (Pilesgrove Twp.), lane addition	Salem	(E)	---	(C)	---	---	---
40		Bally St. and Main St., intersection improvements	Salem	(E)	---	(C)	---	---	---
41		Old Kings Highway, intersection improvement	Burlington	(C)	---	---	---	---	---
46		Lexington Ave. & Randolph Ave., intersection improvements	Passaic	(C)	---	---	---	---	---
46		Over Musconetcong River, brdg. rehab.	Warren	(E)	(E)	(C)	---	---	---
47		G.S.P. to 6th St., drainage	Cape May	---	(C)	---	---	1	---
52		Over 4 structures, deck patching	Cape May	---	---	(C)	---	1	---
54		Over Great Egg Harbor, removal of old brdgs.	Atlantic	(E)	(C)	---	---	---	---
54		Over Penny Pot Stream, brdg. removal	Atlantic	(E)	(C)	---	---	---	---
73		Jackson Rd., inter. impr.	Camden	(E)	(R)	---	(C)	---	---
78		Clinton Park & Ride	Hunterdon	(E)	(C)	---	---	---	---
78		Springfield Ave. to Burnet Ave., safety	Union	(E)	(C)	---	---	1	---
79		At Newman Springs Rd. & School House Rd., inter. impr.	Monmouth	(C)	---	---	---	---	---
94		Intersection improvement at Co. Rt. 515	Sussex	(R&C)	---	---	---	---	---
124		Pack Ave. to Tuscan St., drainage & resurfacing	Essex	(C)	---	---	---	---	---

## Notes:

1. This table generally excludes those projects included in the NJDOT F.Y. 1985 Construction Program that have been advertised for construction or are under construction. Several categorical and miscellaneous categories included in the construction program are excluded from this table as well.
2. All amounts are in millions of current dollars. All amounts have been rounded to the nearest million dollars and costs less than \$0.5 million are not shown.
3. During the life of this plan there may be refinements that will alter project costs or scheduling of type of work.
4. Location number is keyed to Figure 16.

## Legend

E	Engineering
U	Utilities
R	Right of Way
C	Construction



# MISCELLANEOUS (CONT'D)

Loc. No.	Route	Description	County	F.Y. 85	F.Y. 86	F.Y. 87	F.Y. 88	Total F.Y. 1985-88	F.Y. 89 And Beyond
130		Church Rd., Branch Pike, Cinnaminson Ave., inter. impr.	Burlington	(C)	---	---	---	---	---
156		Over Doctors Brook, brdg. rehab.	Mercer	---	---	(C)	---	---	---
195		Arena Drive to Co. Rt. 527, fencing	Mercer Monmouth	(E)	---	---	---	---	5(C)
202		Mine Brook, culvert repl.	Somerset	---	---	---	---	---	To be deter- mined
295		Rt. 38 to Rt. 130, signs	Burl.	---	---	(R)	(C)	5	---
295		Little Timber Crk. to Tindell Run, skid resistant overlay	Camden	(E)	(C)	---	---	---	---
495		Co. Rt. 501 to Hudson Blvd., fencing various structures	Hudson	(E)	(C)	---	---	1	---
PIP		Over Allison Pk. Rd., brdg. rehab.	Bergen	---	---	(C)	---	1	---
PIP		Pedestrian Tunnel	Bergen	---	---	(C)	---	---	---
PIP		SB over Rt. 9W	Bergen	---	---	(C)	---	---	---
		Traffic Signal Contract #5	Statewide	(C)	---	---	---	1	---
		Traffic Signal Contract #5	Southern NJ	(C)	---	---	---	---	---
		Traffic Signal Contract #6	Bergen Essex Hudson	(C)	---	---	---	2	---
		Traffic Signal Contract #8	Southern N.J.	(C)	---	---	---	---	---
		Bridge inspection rating & evaluation	Statewide	(E)	(E)	(E)	---	10	---
		Miscellaneous Contract Adjustments	Statewide	(E,U, R&C)	(E,U, R&C)	(E,U, R&C)	---	6	---
		Bridge house & operating machinery rehab.	Statewide	(E&C)	(E&C)	(E&C)	---	7	---
		Additional Local Aid Projects	Statewide	(E,U, R&C)	(E,U, R&C)	(E,U, R&C)	(E,U, R&C)	35	---
		Miscellaneous		(E,U, R&C)	(E,U, R&C)	(E,U, R&C)	(E,U, R&C)	46	---
		Subtotal						126	

## Notes:

1. This table generally excludes those projects included in the NJDOT F.Y. 1985 Construction Program that have been advertised for construction or are under construction. Several categorical and miscellaneous categories included in the construction program are excluded from this table as well.
2. All amounts are in millions of current dollars. All amounts have been rounded to the nearest million dollars and costs less than \$0.5 million are not shown.
3. During the life of this plan there may be refinements that will alter project costs or scheduling of type of work.
4. Location number is keyed to Figure 16.

## Legend

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 R - Right of Way  
 C - Construction

## SHORT-RANGE PLAN

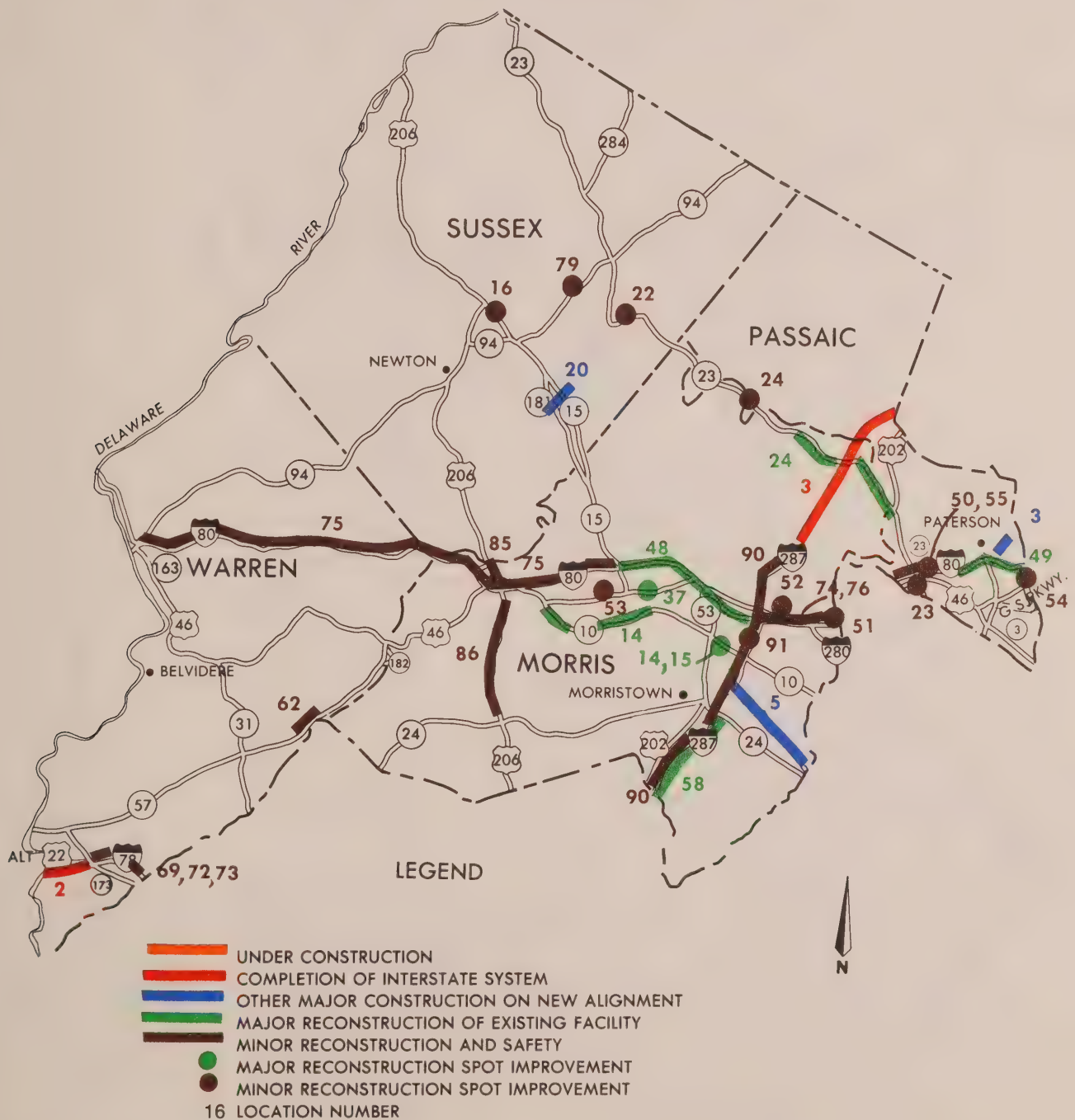
### STATE PARTICIPATING HIGHWAY IMPROVEMENTS

Note: Projects shown will start in the F.Y. 1985-88 time frame but may not necessarily be completed. See Table 12 for further clarification.



**FIGURE 16-2**  
**SHORT-RANGE PLAN**  
**STATE PARTICIPATING HIGHWAY IMPROVEMENTS**  
**MORRIS, PASSAIC, SUSSEX AND WARREN COUNTIES**

*Note: Projects shown will start in the F.Y. 1985-88 time frame but, may not necessarily be completed. See Table 12 for further clarification.*





**FIGURE 16-3**  
**SHORT-RANGE PLAN**  
**STATE PARTICIPATING HIGHWAY IMPROVEMENTS**  
**MIDDLESEX AND UNION COUNTIES**

*Note: Projects shown will start in the F.Y. 1985-88 time frame but, may not necessarily be completed. See Table 12 for further clarification.*



**FIGURE 16-4**  
**SHORT-RANGE PLAN**  
**STATE PARTICIPATING HIGHWAY IMPROVEMENTS**  
**HUNTERDON, MERCER AND SOMERSET**

*Note: Projects shown will start in the F.Y. 1985-88 time frame but, may not necessarily be completed. See Table 12 for further clarification.*



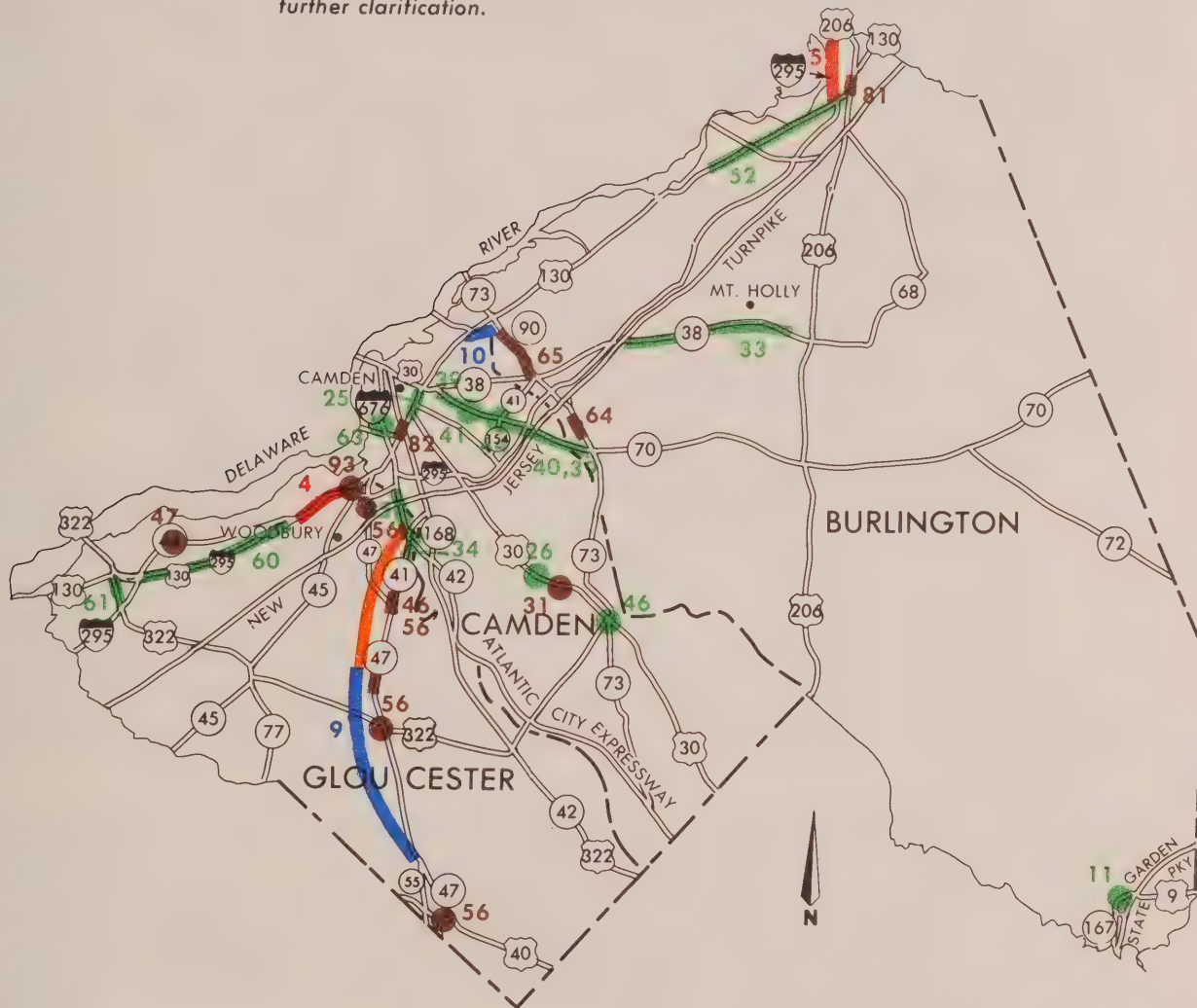
**FIGURE 16-5**  
**SHORT-RANGE PLAN**  
**STATE PARTICIPATING HIGHWAY IMPROVEMENTS**  
 MONMOUTH AND OCEAN COUNTIES

*Note: Projects shown will start in the F.Y. 1985-88 time frame but, may not necessarily be completed. See Table 12 for further clarification.*












*Note: Projects shown will start in the F.Y. 1985-88 time frame but, may not necessarily be completed. See Table 12 for further clarification.*



### LEGEND

-  UNDER CONSTRUCTION  
 COMPLETION OF INTERSTATE SYSTEM  
 OTHER MAJOR CONSTRUCTION ON NEW ALIGNMENT  
 MAJOR RECONSTRUCTION OF EXISTING FACILITY  
 MINOR RECONSTRUCTION AND SAFETY  
 MAJOR RECONSTRUCTION SPOT IMPROVEMENT  
 MINOR RECONSTRUCTION SPOT IMPROVEMENT  
16 LOCATION NUMBER

**FIGURE 16-7**  
**SHORT-RANGE PLAN**  
**STATE PARTICIPATING HIGHWAY IMPROVEMENTS**  
**ATLANTIC, CAPE MAY, CUMBERLAND AND SALEM COUNTIES**

*Note: Projects shown will start in the F.Y. 1985-88 time frame but, may not necessarily be completed. See Table 12 for further clarification.*



**LEGEND**

- UNDER CONSTRUCTION
- COMPLETION OF INTERSTATE SYSTEM
- OTHER MAJOR CONSTRUCTION ON NEW ALIGNMENT
- MAJOR RECONSTRUCTION OF EXISTING FACILITY
- MINOR RECONSTRUCTION AND SAFETY
- MAJOR RECONSTRUCTION SPOT IMPROVEMENT
- MINOR RECONSTRUCTION SPOT IMPROVEMENT
- 16 LOCATION NUMBER

### c. Local Needs

Prior to 1974, the state provided some assistance to county and municipal governments through its State Aid Road Program. However, as a result of severe fiscal problems faced by the state in 1974, the program was discontinued as a recurring program thereafter. Since that time, state aid for county and municipal streets has generally been limited to providing the "local" match for projects on the Federal-Aid Urban System. However, the complexity and scope of projects in the most urban counties in the State has resulted in a consistent backlog of unused federal funds in some of these areas. The 1979 Transportation Bond Issue did provide some \$80 million in state funds to assist local governments in their road improvement programs, but these funds only amounted to a stop gap measure.

An essential element of the New Jersey Transportation Trust Fund is the assistance it provides to local governments. First, the Trust Fund permits the substitution of 100% state funds for approximately \$35 million in Federal-Aid Urban System (FAUS) funds that have, to date, gone to most counties annually. This substitution is expected to enable the counties and municipalities to complete considerably more projects with the same amount of dollars because it frees the counties and municipalities from exacting, federal requirements that must be followed when federal funds are used.

Each county in the state will receive not less than the level of funding received under the FAUS program during 1984 for its county and municipal projects. All backlogged FAUS funds due the counties will remain available, and under no circumstances will any county, including those not included in the current FAUS program, receive less than \$300,000 a year.

The FAUS funds that will be freed up as a result of this substitution program will continue to be used on FAUS projects throughout the state. However, the funds will be funneled to the larger projects of regional importance that have gone unfunded under the current program because of insufficient funds.

Local aid funds will be limited to construction, although there will be exceptions allowed in special cases. The regulations for the local aid portion of the Trust Fund require each county preparing a four-year Capital Transportation Program to show how the state aid funds would be spent. Other than this program approval, participation by NJDOT will be minimal in order to eliminate as much "red tape" as possible.

Second, the Trust Fund will provide, subject to legislative appropriations, a municipal aid program totalling \$19.0 million annually to address municipal transportation projects. This program will contain two parts: Discretionary and Formula Aid.



Under the municipal discretionary aid fund, the Commissioner of NJDOT may at his discretion allocate aid to municipalities to address emergency and critical transportation projects. This program will receive 4/19 of the total municipal aid program.

Under the municipal formula aid program, the Commissioner of NJDOT will allocate aid to municipalities for public highways based on a distribution factor based half on mileage and half on population. The Commissioner, however, is to determine the priority for the funding of projects based on volume of traffic, safety considerations, growth potential, readiness to obligate funds and local taxing capacity. This program will receive 15/19 of the total municipal aid program.

As noted previously, the Bridge Rehabilitation and Improvement Act authorizes \$135 million in state bond funds which when combined with \$242 million in federal dollars will provide \$377 millions for bridge work. During June of 1984, two appropriations bills were passed by the State Legislature identifying the first group of bridges on the state and local road systems that will be rehabilitated or replaced under the program. A list of more than 200 bridges from around the state have been earmarked for improvement totalling \$198.7 million. The bills appropriate \$114.2 million for repairs to state-maintained bridges and \$84.5 million for county and municipal bridges.

The process for selecting local bridges to be improved under the program involves a screening of local submissions by several county and municipal engineers from different regions of the state. The local projects in each county selected to be funded under the program are based on a formula that weighs two-thirds for population and one-third for the number of deficient bridges. The formula also provides that no county shall receive less than \$500,000. This process will be followed in succeeding years until the monies authorized through the act are exhausted.

## **2. Authorities and Commissions**

The following is an overview of the short-range plans of the authorities and commissions. The text discusses the Capital Programs as compiled by these agencies and/or the operating and maintenance costs which they are expecting to incur.

It should be noted that the information reported by the authorities and commissions varies in content and duration.

#### a. The New Jersey Expressway Authority

The following is a list of the Expressway Authority's proposed short term improvements:

PROJECT	ESTIMATED COST	YEAR CONSTRUCTION BEGINS
1. Pavement Overlay Program	\$3,000,000 (in 1985)	on-going
2. Addition of Third Lane:		
a. EASTBOUND from M.P. 33 in Winslow Twp., to the Pleasantville Toll Plaza (includes Farley Service Plaza exit improvements)	\$35,000,000	1985
b. WESTBOUND from the Pleasantville Toll Plaza to the Garden State Parkway	not available	This section may be included with the eastbound construction.
c. WESTBOUND from the Garden State Parkway to M.P. 33 in Winslow Twp.	not available	Necessary drainage work for this project will be accomplished as part of the eastbound contract. No schedule for final construction.
3. Franklin Avenue Ramps	\$ 650,000	1985
4. Guide Rail Modernization	\$ 890,000	on-going, to be completed in 1985
5. Relocation of Exit 7 Ramps	\$ 350,000	No schedule

A recently completed capital project was the addition of ramps and toll plazas at Delilah Road. The cost of this project was \$700,000.

#### b. Cape May County Bridge Comission

An in depth study of Commission bridges has been recently completed. As a result of this and previous studies, maintenance and repair work will continue on these structures. Effective May 1, 1984, the Cape May County Bridge Commission implemented a toll increase. The added revenues will be dedicated to the Commission's Bridge Improvement Program. Proposed short range improvements include:

- Ocean City-Longport Bridge-concrete work to repair spalling is continuing and will be completed very soon. Bridge steel work is already completed.
- Middle Thoroughfare Bridge-construction to regear the bascule span, repair the treadle and repair toll gates is scheduled to begin in 1985.
- Great Channel Bridge (North Wildwood to Stone Harbor)-construction is planned to include steel work, pilings, and concrete repair work. The project cost is estimated at \$230,000, of which \$150,000 will be provided from New Jersey bridge bond funds.

### c. Delaware River And Bay Authority

The Delaware River and Bay Authority will be adding a fifth ferry to their fleet which is scheduled for delivery in May 1985. The vessel is presently under construction and will cost \$14.5 million.

Roadway improvements planned for the Delaware Memorial Bridge Twin Spans and roadway approaches include latex overlay on the eastbound and westbound spans, repairs to the approach roadways, refurbishing of the small auxiliary bridges and expansion of the existing maintenance building. The costs for roadway work are projected as follows:

YEAR	COST
1985	\$3.5 Million
1986	\$2.5 Million
1987	\$3.0 Million

The operating and maintenance costs for the Authority in 1983 were \$12.4 million.

### d. Delaware River Joint Toll Bridge Comission

The Delaware River Joint Toll Bridge Commission plans to begin construction on the following projects within the next five years:

PROJECT	COST (thousands of \$)	YEAR
1. Trenton-Morrisville Toll Bridge Deck Rehabilitation and reconstruction of 4 ramps at Pennsylvania Ave. interchange	1,700	1985
2. Pennsylvania approach roadway at New Hope-Lambertville Toll Bridge, Resurfacing and Rehabilitation	250	1985
3. Portland-Columbia Bridge Deck Rehabilitation, guide rail and signing	1,500	1985
4. Delaware Water Gap (I-80) Toll Bridge Deck Replacement	7,000	1985 1986 1987
5. Calhoun St. Bridge	(cost and schedule information being revised)	

The maintenance and operating costs for the next five years have been estimated to be between \$8 and \$9 million per year.



#### e. The Port Authority Of New York And New Jersey

The following project costs through fiscal year 1988 have been placed on the Authority's transportation improvement program:

PROJECT	PROJECT COSTS (Millions of \$)			
	1985	1986	1987	1988
<b>PATH:</b>				
Shops and yards	1.5	21.1	26.0	18.3
Rolling stock	27.1	89.6	35.3	19.9
Safety Program	42.4	36.2	24.3	6.0
Electrical Power Distribution System	17.7	26.9	12.6	4.4
Other (stations and system rehab.)	7.9	6.4	8.9	7.8
PATH TOTAL	96.6	180.2	107.1	56.4

#### Maintenance, Modernization and Rehabilitation of Tunnels, Bridges and Terminals:

Holland Tunnel	36.0	33.0	15.0	16.0
Lincoln Tunnel	21.0	13.0	11.0	6.0
George Washington Bridge and bus station	17.0	4.0	1.0	2.0
Bayonne Bridge	---	---	---	---
Goethals Bridge	2.0	1.0	---	---
Outerbridge Crossing	2.0	2.0	2.0	---
Port Authority Bus Terminal	24.0	9.0	2.0	1.0
Tunnels, Bridges and Terminals Total	102.0	62.0	31.0	25.0

#### f. New Jersey Turnpike Authority

The following is a list of short term projects to be implemented by the New Jersey Turnpike Authority:

PROJECT	COST (thousands of \$)				
	1985	1986	1987	1988	1989
1. Median barrier replacement, M.P. 51-83 and Newark Bay-Hudson County Extension	3,000	3,000	3,000	3,000	3,000
2. Relocation of Interchange 7	---	---	20,000	---	---
3. Widen Interchange 14 toll plaza	3,000	---	---	---	---
4. Widen Interchange 14C toll plaza	3,000	---	---	---	---
5. Widen Interchange 16W toll plaza	---	---	---	---	3,000

(CONT'D)

PROJECT	COST (thousands of \$)				
	1985	1986	1987	1988	1989
6. Improvements to Interchange 15E ramps at Raymond Blvd. (\$7 M cost to be shared with NJDOT)	3,500	---	---	---	---
7. Construction of truck stops	---	---	11,000	---	---
8. Upgrading of interchange signs along southern end of turnpike to conform to MUTCD*					

(estimate and schedule are not available)

\* Manual on Uniform Traffic Control Devices

**g. Delaware River Port Authority**

The following represents the DRPA planned Capital Projects for the period 1985-1988:

PROJECT	1985	1986	1987	1988
Walt Whitman Bridge	\$ 1,000,000	\$ 4,500,000	\$ 4,500,000	---
#I-76 Ramps				
Ben Franklin Bridge	26,000,000	34,500,000	6,000,000	---
Betsy Ross Bridge	---	---	4,230,000	5,000,000
#Rt. 90 Connection				
Equipment and vehicles (all bridges)	400,000	400,000	400,000	400,000
Rapid Transit System PATCO	1,722,000	---	---	---
Viaduct repairs, reverse signaling, update cars	499,770	---	---	---
Potential New UMTA Grants	2,158,500	2,346,000	1,731,000	4,547,100

## **h. Burlington County Bridge Commission**

The following are the Burlington County Bridge Commission's maintenance and improvement plans for the next decade:

### **(1) Capital Improvements**

- Electrical improvements to the Burlington Bristol Bridge (new automatic controls for the lifting machinery): \$250,000
- Connections to sanitary sewers at Riverside Delanco Bridge: \$25,000
- Replacement and computerization of toll equipment, Tacony Palmyra Bridge and Burlington Bristol Bridge: \$400,000
- New Office and Maintenance facilities at Burlington Bristol Bridge: \$600,000
- Signing for interstate highways (I-95 & Rt. 90F): \$250,000
- Bulk sand/salt, storage facilities, Tacony Palmyra Bridge and Burlington Bristol Bridge: \$120,000

### **(2) Maintenance Planning**

<b>MAINTENANCE ITEM</b>	<b>TACONY- PALMYRA</b>	<b>BURL.- BRISTOL</b>	<b>DELANCO</b>
1. Painting Bridge	\$ 800,000	\$600,000	\$60,000
2. Plaza slab repair	250,000	- - -	- - -
3. Deck replacement	6,433,000	848,000	- - -
4. Rehabilitation of Fender	500,000	750,000	- - -
5. Repaving Deck	200,000	120,000	- - -

## **i. Palisades Interstate Park Commission**

The Park Commission has indicated to the New Jersey Commission on Capital Budget and Planning their capital needs through 1989 as follows:

<b>PROJECT</b>	<b>COST (thousands of \$)</b>				
	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>
1. Rehabilitation of bridges, improvement of shoulders, and replacement of lighting and guiderails	- - -	1,260	2,280	1,280	750
2. Rehabilitation of public facilities	475	- - -	- - -	- - -	- - -
3. State Line Lookout Park	- - -	- - -	480	720	720
4. Development and improvement of Ross Dock	- - -	75	250	375	- - -



#### j. New Jersey Highway Authority

The New Jersey Highway Authority lists the following improvements in their 5 year program:

PROJECT	COST (thousands of \$)
Future Planning	600
Toll Facilities	57,000
Signing	1,400
Maintenance Areas	5,400
Service Areas & Police Buildings	10,600
Landscaping	6,000
Pavement Restoration	19,000
Equipment Additions	2,350
Guard Rail	16,065
Lighting	600
Communications	381
Right-of-Way Protection	50
Traffic Count Stations	200
Park, Recreation & Picnic Areas	300
Garden State Thruway	235
Water and Sewage	500
Bridge Repair & Extraordinary Maint.	27,926
Arts Center	4,000
Miscellaneous Improvements	13,000
Widening State Sections 5 & 6	1,163
Driscoll Expressway	656
Union Toll Plaza Expansion	10,679
Interchanges 74 & 77	4,394
Auxil. Lanes, Union-Bloomfield	9,318
Rt. 18 Interchange Ramps	5,000
Administration Building	454
Parkway Widening-Overall Costs	427
Widening-Asbury Pk. to Int. 83	116,000
Widening-Toms River Toll Plaza	5,700
Widening-Barnegat & New Gretna Toll Plazas	4,059
Interchange 153	56
Essex County Service Roads	4,000
Driscoll Bridge Capacity Imprvts.	9,000
Interchange 36 at Tilton Rd.	750
Interchange 124	23

(CONT'D)

PROJECT	COST (thousands of \$)
Paratransit Facilities	293
Bergen County Improvements	1,451
Atlantic County Safety Imprvts.	14,000
Raritan Toll Area Improvements	9,940
Widening-Int. 163 to 168	13,000
Widening Inner Roadways	20,000
New Interchange 116	4,000
TOTAL	<u>\$400,470</u>

Some of these projects, including the widening from Asbury Park to Interchange 83 are underway, and will be completed in the near term.

Since October, 1983, the New Jersey Highway Authority has made a number of modifications to the 5 year capital program which have increased the total cost from \$283 million to over \$400 million. This is an extremely ambitious program. The New Jersey Department of Transportation has serious reservations as to the delivery of a program with such magnitude within the specified 5 year time frame.

### 3. Amtrak Projects

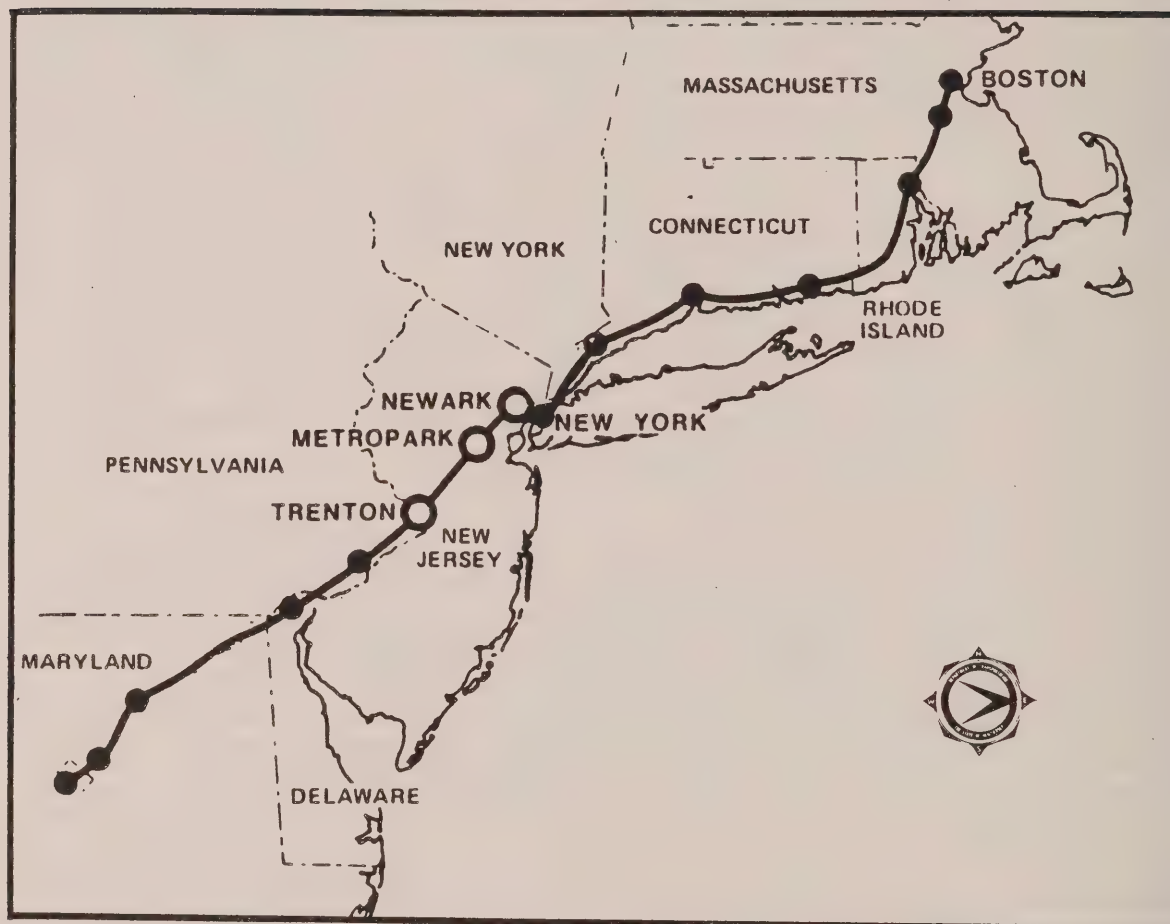
The Northeast Corridor Rail Passenger Service Improvement Program is a joint effort by the Federal Railroad Administration (FRA), the Departments of Transportation of the States along the Corridor, transportation authorities whose facilities interact with the Corridor, and major cities located along the Corridor (See Figure 17). Although the National Railroad Passenger Corporation (AMTRAK) owns most of the mainline track, it has operating agreements with six commuter agencies (including NJ TRANSIT) concerning trackage rights and access to stations not owned by AMTRAK.

The following improvements are either underway or completed on the Corridor in New Jersey:

#### a. Track Improvements

- Curve Realignments of Track
- Wooden Tie Renewal
- New Continuous Welded Rail Installation
- Complete Track Surfacing for Smooth Ride and Safety
- Modernization of Signalization
- Other Roadbed Improvements:
  - Ballast Cleaning
  - Rail Grinding
  - Turnout Rehabilitation
  - Drainage Improvement
  - Subgrade Stabilization
  - Joint Elimination

**FIGURE 17**  
**NORTHEAST CORRIDOR**  
**RAIL PASSENGER SERVICE**  
**IMPROVEMENT PROGRAM**



**b. Bridge Improvements**

- Upgrade/Rehabilitation of Bridges
- Replacement of Bridges

**c. Tunnel Improvements in the Hudson ("North") River Tunnel**

- Provide Adequate Drainage and High-Quality Track Structure

**d. Signalling and Traffic Control**

- Rehabilitation/Modernization of Signal System
- Reverse-Signalling on Selected Main Track as Required

**e. Communications**

- New Communications System for Voice and Data Transmission



## **f. Maintenance Facilities**

- Maintenance-of-Way Base at Adams

## **g. Station Improvements**

- Trenton Station-The Northeast Corridor Improvement Project (NECIP) has completed minor architectural renovations of the station. AMTRAK, with state funds, has constructed a bus ticket office.
- Newark Station-Construction of \$20 million of major improvements is nearing completion. They include: major architectural renovation; replacement of escalators; replacement of heating, electrical, and lighting systems; and roof and skylight refurbishment. Matching funds are being jointly provided by the state and PANY&NJ. This former AMTRAK station is now owned by NJ TRANSIT.

## **h. Fencing**

- Installation of Right-of-Way Fence at Selected Locations
- Fencing of Overhead Bridges

## **i. General Operations**

Markets in smaller communities are best served and more easily expanded by providing ready access through a network of connector services linked to high-speed intercity trains.

To meet the demand forecast for the intercity market, train service having the following characteristics is proposed:

- Frequent, high-quality service, offering best journey times between limited number of major cities.
- Secondary integrated service for the remaining stations linked and coordinated at key points to the main service to provide greatly increased travel opportunities to and from the smaller stations. This would be provided in a coordinated service between Amtrak and transit authority trains.
- Services that accommodates the needs of commuters for stable and reliable service, and that is flexible enough at peak periods to avoid severe conflicts with commuters for use of the available train capacity of the route.

The federal contribution to the entire NECIP will be \$2.2 billion, with the New Jersey section costing approximately \$260 million.

## **j. Restoration of Rail Service to Atlantic City**

In a joint venture with NJ TRANSIT, AMTRAK also intends, during the time frame of the Short Range Plan, to reinstitute rail service linking the Northeast Corridor at Philadelphia with Atlantic City. Service restoration will be possible once the former Pennsylvania Reading Seashore Line (PRSL) has been rehabilitated. AMTRAK intends to operate intercity trains from both Philadelphia and New York to Atlantic City, with one intermediate stop at the PATCO High Speed Line Woodcrest Station, and NJ TRANSIT intends to operate commuter service between Woodcrest and Atlantic City. Initial intermediate commuter stops are planned at Atco, Hammonton, Egg Harbor, and Absecon.

Project financing includes funding from AMTRAK, UMTA, NJ TRANSIT, and the Atlantic County Improvement Authority (ACIA). At the Atlantic City terminus, a new rail terminal is envisioned, adjoining a new convention hall complex planned by ACIA.

#### **4. Freight Services**

The short range capital program seeks to insure the maintenance of essential rail services in the face of a continued effort by CONRAIL, the state's only interstate rail carrier, to cut back on those lines considered to be non-essential. Table 13 shows a summary of rail freight needs for the period 1985-1988. Specific project proposals are shown in Table 14.

#### **5. Aviation Services**

##### **a. Airport Safety Fund**

The Airport Safety Fund is the sole capital source the state has for funding aviation improvements. The funds come wholly from user fees, i.e., a two cent fuel tax, aviation license fees and motor fuel taxes. The fund generates between \$800 thousand and \$1.0 million annually.

The Aviation Improvement Program that the fund supports moves in response to local sponsor initiatives. Therefore, it is not possible in advance to specify detailed elements of the four year plan. Instead, the four year plan as presented here, represents more of a forecast of local sponsor initiatives or applications which the Department expects it will respond to.

##### **b. Runway Resurfacing/Rehabilitation/Reconstruction**

It is forecasted that over the next four years approximately twelve airports will apply for runway resurfacing/rehabilitation/reconstruction work. This number represents approximately 30 percent of the forty paved facilities. It is additionally forecasted that approximately one third of this work will be accomplished in the first two year period, and the remainder in the latter two year period.

It is additionally forecasted that approximately ten of the twenty unpaved runway airports will apply for runway paving assistance. Once again, it is forecasted that a third of this work will be accomplished in the first two year period.

##### **c. Taxiway Resurfacing/Rehabilitation/Reconstruction**

Of the approximate sixty airports in the state eligible for state aid, it is anticipated that twenty one facilities will apply for taxiway improvement assistance, of which approximately eleven will apply for traditional resurfacing/rehabilitation/reconstruction aid. It is further expected that the remaining ten will apply for aid for new taxiway construction. In all likelihood the first projects undertaken in the

**TABLE 13**  
**SHORT-RANGE PLAN FOR FREIGHT SERVICES**  
**(SUMMARY BY PROGRAM CATEGORY)**

PROGRAM CATEGORY	F.Y. 85	F.Y. 86	F.Y. 87	F.Y. 88	TOTAL
Rail Rehabilitation	4.8	3.9	6.0	1.0	15.7
Rail Acquisition	- - -	1.0	- - -	0.5	1.5
	<u>4.8</u>	<u>4.9</u>	<u>6.0</u>	<u>1.5</u>	<u>17.2</u>

*Note: All amounts are in millions of current of dollars.*

**TABLE 14**  
**SHORT-RANGE PLAN FOR FREIGHT SERVICES**  
**(FY 1985 - 88)**

PROJECT <sup>1</sup>	PROGRAM CATEGORY	COUNTY	COST
	F.Y. 1985		
NYS&W Hudson Branch	Rehab.	Sussex	
BR&W Transfer Facilities	Rehab.	Hunterdon	
High Bridge North	Rehab.	Morris	
Pavonia Yard Team Track	Rehab.	Camden	
WJSLRR Salem Br. Rehab.	Rehab.	Gloucester/Salem	
SFL Cape May Br. Rehab.	Rehab.	Cape May	
Alpha Connectors	Rehab.	Hunterdon	
SFL Atl. City Mainline	Rehab.	Atlantic/Camden	
S&K Branch	Rehab.	Hudson	
Towpath Ind. Track	Rehab.	Mercer	
SUBTOTAL			<u>4.8</u>

<sup>1</sup>-For project details refer to the N.J. State Rail Plan 1984 Update

*Note: All amounts are in millions of current dollars.*



**TABLE 14 (CONT'D)**

<b>PROJECT<sup>1</sup></b>	<b>PROGRAM CATEGORY</b>	<b>COUNTY</b>	<b>COST</b>
<b>F.Y. 1986</b>			
JSRW Bridgeton Rehab.	Rehab.	Cumberland	
Southern Sec. Rehab. (CRC)	Rehab.	Ocean	
SFL South Sec. Rehab.	Rehab. & Acqustn.	Camden, Atlantic, Gloucester	
Core Line Purchases	Rehab. & Acqustn.	Statewide	
Rehab. Core Lines	Rehab.	Statewide	
M&E Mainline Rehab.	Rehab.	Morris	
SUBTOTAL			<hr/> 4.9
<b>F.Y. 1987</b>			
Satellite Intermodal Term.	Rehab.	Northern N.J.	
CRC Flexi-Flo Reloc.	Rehab.	Bergen	
Portside/Kearny Improv.	Rehab.	Hudson/Essex	
SUBTOTAL			<hr/> 6.0
<b>F.Y. 1988</b>			
Acquisition Core Lines	Acqustn.	Statewide	
Rehab. Core Lines	Rehab.	Statewide	
SUBTOTAL			<hr/> 1.5
<b>TOTAL</b>			<hr/> 17.2

NYS&W - New York, Susquehanna and Western Railway Corp.  
 BR&W - Black River and Western Railroad  
 SFL - Shore Fast Line, Inc.  
 CRC - Consolidated Rail Corp.  
 M&E - Morristown and Erie Railroad  
 WJSLRR - West Jersey Shortline Railroad  
 JSRW - Jersey Southern Railway

<sup>1</sup> - For project details refer to the N.J. State Rail Plan 1984 Update

Note: All amounts are in millions of current dollars.

taxiway category will be to repair existing facilities. Later in the program there should be an emergence of projects oriented to the construction of entirely new taxiways.

#### **d. Runway/Taxiway/Airport Lighting**

In the next four years, it is anticipated that a full third of the airports will apply for runway/taxiway/airport lighting assistance. Applications for assistance in this area should run particularly heavy in the second and third year of the program. Activity should be greatest at the privately owned airports. In all likelihood, the majority of development will be to entirely replace existing, but functionally marginal in-place lighting systems. There should also be significant new installation of visual approach slope indicators which serve to guide pilots to runway ends by projecting a coded light beam. This element of the program will significantly increase the nighttime utility of the airport system.

#### **e. Aircraft Holding Areas**

Some nine of the system's sixty airports are likely to apply for aircraft holding area assistance. These holding areas are commonly called aprons. Application for such improvements should run, at their heaviest, in the second, third, and fourth years of the program. The principal system benefit of these holding areas is to increase aircraft transient storage capacity in the immediate vicinity of aircraft terminals.

#### **f. Other Types of Aid**

Other types of non-capital aid to be disbursed in the upcoming four years include the following minor categories:

- Wind indicator devices
- Obstruction clearing
- Crash/fire/rescue equipment
- Search and rescue equipment

Disbursement of funds to support development within these minor classifications will be continuous throughout the four year program. In most cases, such development will be to correct minor deficiencies at existing facilities.

### **B. Planning/Preliminary Engineering Studies and Activities**

In the preceding section the projects constituting the implementation portion of the short range plan were described. Also during the short range plan time frame, the Department and other transportation implementing agencies will be undertaking and completing numerous planning and engineering studies and activities which will yield improvement projects for longer term implementation and changes in operating practices. Said studies and activities are summarized in Table 15, and what follows is a description of these efforts. If past experience is any guide, still other studies which cannot be foreseen now will undoubtedly be undertaken during the same time frame so the ensuing study descriptions should not be viewed as an exhaustive list.

**TABLE 15**  
**SHORT-RANGE PLAN**  
**PLANNING/PRELIMINARY ENGINEERING**  
**STUDIES AND ACTIVITIES**

**High Growth Corridor/Area Studies**

- Hudson River Waterfront
- The Route One Corridor
- Improved Access to Atlantic City and Other South Jersey Areas
- Transit Improvements in Monmouth and Ocean Counties
- Hackensack Meadowlands

**Existing Transit Service Enhancement Studies**

- Bus and Rail Park-Ride Programs
- Bus/Rail Coordination
- Eliminating Bus Competition
- Interstate Service Deregulation

**Property Development Efforts by NJ TRANSIT**

- Princeton Junction
- Hoboken Terminal
- Trenton
- Sip Ave., Jersey City
- Metropark
- Princeton Borough

**Functional Classification Studies**

**Congestion Relief Studies**

- Trans-Hudson Congestion Relief
  - Kearny Connection
  - Secaucus Transfer or Connection
  - Dual Powered Locomotives
  - Montclair/Boonton Corridor
  - West Shore
- Construction Project Traffic Mitigation Plans
- Addressing Corridor and Localized Congestion Problems

**Resource Allocation Analysis**

**Freight Related Investigations**

- Continuing Response to Conrail Abandonments
- Intermodal Facilities Study

**Aviation Studies**

- Transportation Access to Newark Airport
- New Jersey Helicopter System Plan Study

**Waterborne Studies**

**Engineering Feasibility Studies**



## **1. High Growth Corridor/Area Studies**

### **a. Hudson River Waterfront**

Redevelopment of the New Jersey Hudson River Waterfront has been a long-standing aim of the waterfront municipalities, affected counties, and the state for many years. Situated as it is within minutes of Manhattan, with a stunning view of the Manhattan skyline, the waterfront's redevelopment potential is easily imagined, and yet this potential is largely unfulfilled. Today's waterfront is a legacy of its past; vacant or underutilized industrial buildings, abandoned and rotting piers, and large vacant tracts that the railroads once used for cargo storage and transfer.

One of the primary reasons why the redevelopment of the waterfront has not occurred is that the waterfront is extremely difficult to access. The northern half of the waterfront is at the base of the Palisades, which physically isolates this portion of the waterfront. The balance of the waterfront has limited access, but this access is via regional roadway facilities which carry traffic to Trans-Hudson crossings, and which are consequently heavily congested.

Notwithstanding the access problems and other inhibiting factors, the redevelopment of the waterfront is now beginning. Completed projects and clearly defined development plans are concentrated in Hoboken and Jersey City, where waterfront access is relatively good, and plans are beginning to emerge along the balance of the waterfront.

As noted previously, state, county, and local governments are anxious to promote this redevelopment, and to this end NJDOT has launched a broad-based transportation study of the waterfront in cooperation with NJ TRANSIT, the New York-New Jersey Port Authority (PA), effected county and local governments, and the developers. The study has several objectives:

- To define the probable magnitude of development which will occur along the waterfront over time.
- To define the needed transportation improvements to facilitate this development, and the necessary staging for these improvements.
- To develop cost estimates for these improvements, and to formulate a financing plan which draws upon available public and private sector financial resources.

The study is expected to be completed by the spring of 1985. Recommended improvements will subsequently be the subject of project-specific design efforts. Based on early findings of the study, design efforts have commenced on two fronts prior to the completion of the study: a busway at the base of the Palisades; and improvements to an existing freight line west of the Palisades which, once improved, will permit the relocation of freight train operations from the waterfront north of Jersey City. The busway is seen as an early relief measure for Lincoln Tunnel related traffic congestion, by providing a faster means of access to the tunnel for buses originating in North Hudson and Bergen Counties. The relocation of freight train operations would unencumber the railroad right of way along the Waterfront for road and mass transit improvements necessary to foster continued waterfront development.

## **b. The Route One Corridor**

The Route 1 corridor between Trenton and New Brunswick is one of the major high-growth corridors in the State. This twenty mile section of highway, which carries approximately 40,000 vehicles a day, is already experiencing severe problems during the peak hours at several locations, particularly in the Princeton area.

The corridor is continuing to experience unprecedented development (and traffic) growth, emanating from Princeton, and attributable to the prestige of Princeton University and Princeton itself. This growth is straining the capacity of Route 1 and its supporting highway network, and shows no signs of abatement. Market based projections indicate that by the early 1990s, office space along Route 1 between Trenton and New Brunswick will triple, housing will increase by over 60 percent, and employment will raise by over 80 percent, with the creation of 44,000 new jobs. This translates into a 50 percent increase in traffic in the corridor. The full realization of proposed development plans could mean as many as 70,000 new jobs in the corridor.

In response to this continuing growth, NJDOT commissioned in 1983 the Route 1 Corridor Study. The overall aim of the study is to identify both long and short term transportation improvements for the corridor, to identify ways in which the growth in the corridor can be managed to curtail the growth in auto traffic, and to identify ways in which necessary transportation easements can be financed, drawing on both public and private sector sources of funds. Near-term improvements have already been identified, and design work underwritten by interstate transfer highway funds is in progress.

The Department has sought to involve all of the principal Route 1 "constituents" in the conduct of the study. An advisory committee consisting of key government and private interests in the corridor has been formed, with technical working groups to examine specific issues. The study is expected to be completed in the spring of 1985.

## **c. Improved Access to Atlantic City and Other South Jersey Areas**

The legalization of casino gambling in Atlantic City has precipitated a casino gambling boom in Atlantic City, and has generated rapid growth in Atlantic City-bound traffic. Though it has only been six years since the legalization of casino gambling, Atlantic City has already become the most frequently visited recreational attraction in the United States, with some 25 million visitors in 1983. There are ten casino/hotels presently in operation, several more under construction, and still several more which are now in the planning stages. This casino-related traffic growth, coupled with increased summer time traffic to the South Jersey shore areas, has renewed interest in the possibility of a new, access controlled highway linking the Delaware Memorial Bridge with Atlantic City, and in the possible extension of Route 55 from its present southern terminus to the Cape May shore area. Both of these highway proposals have been considered in years past, and rejected by the Department for lack of adequate justification in light of overall needs and funding limitations. Circumstances have materially changed, however, warranting reexamination.



To this end, the Department has recently commenced a feasibility study to examine these and other, more modest improvement possibilities to facilitate traffic access to Atlantic City and other South Jersey shore points. The feasibility of toll financing these major new highways will be examined in the study. The study is expected to be completed by the winter of 1984/1985.

#### **d. Transit Improvements in Monmouth and Ocean Counties**

Monmouth and Ocean Counties are two of the fastest growing counties in New Jersey, with large influxes of people who formerly resided in the North Jersey urban core and New York. Attracted by the amenities, clean environment, and relatively low housing prices, many of the newly arriving residents continue to be employed in the North Jersey urban core and New York City, which explains why commuting distances from Monmouth and Ocean Counties are among the longest in the state. For many of these long distance commuters, public transit is essential, and NJ TRANSIT has responded to this need with frequent bus service and continued modernization and improvement to the North Jersey Coast Line (NJCL) commuter railroad. Still other bus services are provided by private bus carriers in this area.

There are, however, opportunities for further transit service improvements. Abandoned railroad rights of way exist within the two counties that conceivably could be used to institute new branch line rail services or bus services.

To address the growing demands for public transit service in these two counties, and to assess the merits of the major new transit investments previously alluded to, NJ TRANSIT and NJDOT will commence a study of transit service improvement needs and possible solutions in Monmouth and Ocean Counties in early 1985. If, as a result of this study, NJ TRANSIT and NJDOT were to conclude that a major, new transit investment warrants further serious consideration, an alternative analysis and environmental assessment of the promising alternatives would ensue. Such an analysis is necessary to qualify for UMTA funding.

#### **e. Hackensack Meadowlands**

Development interest in the Meadowlands continues unabated, notwithstanding the fact that roads linking the Meadowlands with the rest of the region are among the most heavily congested in the state, and becoming more so as a result of growth in Trans-Hudson traffic (discussed later in this section). Recognizing this, plans for specific physical improvements are being readied, as described in the preceding section, and studies of other, prospective physical improvements will be undertaken in the Short-Range Plan time-frame. Noteworthy studies include a forthcoming study of the feasibility of widening Route 3 from the vicinity of Route 46 to the vicinity of Tonnelles Avenue (conceivably, such a widening would enable the express bus-lane to the Lincoln Tunnel to be extended westward, to further enhance the attractiveness of mass transit to Trans-Hudson travellers); and a feasibility study of a widening of the Turnpike Western Spur and relocation of the Turnpike 16W interchange.

In addition to these prospective highway related improvements, improvements in public transit service to the Meadowlands are also being pursued, and a public-



private sector joint effort to promote traffic management among Meadowlands developers and employers has been launched. With respect to public transit service improvements, new bus services are being instituted, and further bus and rail service improvements are slated for consideration, focusing in particular on major traffic generators such as the Sports Complex. Rail service improvement possibilities include prospective new stations on existing rail lines (with connecting bus services to link stations with developments), and the so-called Secaucus transfer or connection which is discussed later in this section.

With respect to traffic management, a public-private sector sponsored "transportation brokerage" has been incorporated in the Meadowlands to aid developers and employers in identifying transit service needs, promoting carpooling and vanpooling, and adopting staggered work hours. These measures are seen by the brokerage sponsors (i.e., the New Jersey Turnpike Authority, the New York-New Jersey Port Authority, the New Jersey Sports and Exposition Authority, HMD, NJDOT, and the Meadowlands Chamber of Commerce) as a potentially effective means of containing traffic growth associated with Meadowlands developments.

## **2. Existing Transit Service Enhancement Studies**

### **a. Bus and Rail Park-Ride Programs**

NJ TRANSIT has launched a multiyear park & ride development program for both bus and rail. The overall goal of this program is to provide sufficient commuter parking capacity to capture a larger share of the commuter travel market and improve operating performance. More specifically, park & rides benefit the user by making transit more accessible and convenient. Operators benefit because park and rides allow them to concentrate more service at fewer locations. Route consolidation often translates into lower operating costs.

NJ TRANSIT has developed criteria and policies to decide where park & ride investments will be made for both bus and rail facilities. Various regions and commutersheds within New Jersey will be targeted for bus or rail parking investments. These decisions are based on the ability of each mode to serve the midtown and downtown Manhattan commuter markets more effectively from every part of the metropolitan area. Once areas in need of parking have been identified, project priority is determined through applications of criteria based on demand, parking supply, growth potential, and impact on operations.

Out of a daily rail ridership of approximately 60,000<sup>1</sup>, 34,353 or 53% used park & ride as a mode of access. Out of a daily bus ridership (to the Port Authority Bus Terminal) of 76,346<sup>2</sup> 17,752 or 23% used park & ride. Thus, while rail use was well below bus ridership, double the number of rail riders used park & ride, indicating a need to devote a significant share of resources to rail park & ride development.

<sup>1</sup> - 1983 NJ TRANSIT Rail Survey

<sup>2</sup> - 1981 Port Authority Bus Passenger Survey

At this time, NJ TRANSIT has 40 rail and 17 bus park & ride projects at various stages of implementation. These project will provide 9,475 new spaces for rail commuters and 5,685 for bus commuters. However, NJ TRANSIT will also devote a significant effort to the study and identification of new opportunities to provide park & ride facilities. Many of these projects will be strategically located to take advantage of other major new activity generators or heavy traffic flows occurring at the confluence of arterial highways. The overall objective of these "new opportunities" will be to attract riders to the State's public transportation system by enhancing accessibility to it.

#### **b. Bus/Rail Coordination**

NJ TRANSIT has made great strides in the five years of its existence in revamping bus and rail service to be more responsive to present day needs. Further adjustments in services to more effectively coordinate bus and rail operations, and to eliminate service overlap may be warranted, however. To this end, NJ TRANSIT is engaged in an ongoing service assessment activity which will result in continuing adjustments to service over time. Said adjustments will enable NJ TRANSIT to realize further gains in productivity, and will provide improved services to transit users. A parallel effort by NJDOT addressing private bus service - NJ TRANSIT rail service coordination will also be undertaken in early 1985.

#### **c. Eliminating Bus Competition**

In 1983/84, NJDOT convened a task force of public and private bus carrier interests to address long-standing problems plaguing relations between NJ TRANSIT and private bus carriers. The task force unanimously concluded that competition among bus services is antithetical to the best interests of public and private carriers alike, and agreed that conscious steps should be taken to eliminate such competition. The task force also agreed that the best way to accomplish this would be to define each operator's "territorial limits", and to make adjustments to services so as to eliminate overlap among the territories.

Consistent with the task force recommendations, these principles have been applied in resolving specific disputes among the operators, and will continue to be applied over time. Both NJ TRANSIT and NJDOT are engaged in systematic efforts to identify bus service competition, and to reach accommodations among the competing interests where such competition is found.

#### **d. Interstate Service Deregulation**

The Bus Regulatory Reform Act of 1982 ushered in a new era of bus deregulation. The premise of the Act was that interstate competition among bus operators benefits the bus riding public, and that such competition should be fostered by a relaxation of interstate bus regulations. Largely at New Jersey's urging, protective provisions were built into the Act to protect commuter bus services crossing state lines from such competition, recognizing that such commuter services are generally unprofitable, and





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thus subject to economic harm if new, for profit, bus services are permitted to operate indiscriminately. Under the provision of the Act, the Interstate Commerce Commission (ICC) is charged with the responsibility to assess whether new, interstate bus service proposals would compete destructively with established interstate commuter services, and to deny new service proposals where such destructive competition appears likely to occur. Notwithstanding these protective provisions within the Act, the ICC has not vigorously applied them, and thus new interstate bus services which do compete destructively with established interstate commuter services have been permitted to occur.

The private-public bus task force organized by NJDOT in 1983/84 to look at public-private bus carrier issues was unanimous in its opinion that steps needed to be taken to insure the enforcement of the protective provisions of the Bus Regulatory Reform Act, and to eliminate instances of destructive competition which have been permitted to occur. Efforts are now being made to persuade the ICC to enforce the protective provisions of the Act; failing this, it may be necessary to seek to relieve the ICC of regulatory responsibility for interstate services within the New York/New Jersey metropolitan area (by statutory exemption similar to the Washington, D.C. metropolitan area), with the regulation of interstate bus services within the metropolitan area assumed instead by an agency specifically legislated and empowered to exercise such a regulatory function.

### **3. Property Development Efforts by NJ TRANSIT**

NJ TRANSIT's Office of Property Development is currently involved in a number of projects aimed at promoting development adjoining transit facilities, to generate revenue from property holdings and added transit ridership. These projects include:

#### **a. Princeton Junction**

NJ TRANSIT and Amtrak are currently negotiating a long term ground lease with a private developer which will result in the construction of 300,000-400,000 sq. ft. of office buildings at this location. NJ TRANSIT will receive significant direct lease revenue and will realize increased transit ridership from the development.

#### **b. Hoboken Terminal**

NJ TRANSIT has been working with the Port Authority on planning for a Hoboken Waterfront Development Project. The City of Hoboken and Stevens Institute are also involved. Although NJ TRANSIT is not specifically committed at this time to the project, the transit agency has identified approximately 40 acres of its property at the Hoboken Terminal which could be made available for development. Financial negotiations are currently being conducted with the Port Authority.

#### **c. Trenton**

NJ TRANSIT is currently discussing development opportunities at the Trenton station with several developers. The transit agency has requested that developers submit formal financial proposals for review and subsequent selection of a developer. The construction of 74,000-100,000 sq. ft. of office space is anticipated.



#### **d. Sip Ave., Jersey City**

NJ TRANSIT has requested developer proposals for a 33,700 sq. ft. parcel in the Journal Square area. Proposals were due by November 1, 1984. This parcel has been the subject of much developer interest, and it could support at least 200,000 sq. ft. of office space.

#### **e. Metropark**

A short-term study is currently being prepared by NJ TRANSIT with assistance from NJDOT to determine the feasibility of construction of an office building and parking deck at the Metropark station. The study should be completed by the end of 1984. If the project is feasible, a developer solicitation process could begin in early 1985.

#### **f. Princeton Borough**

NJ TRANSIT has negotiated a sale of the Princeton Dinky station parcel to Princeton University. Under the terms of the sale, NJ TRANSIT would receive market value for the property, all necessary transportation, ticket sales and commuter parking easements, and Princeton would make approximately \$400,000 of site improvements within the next 2-3 years.

In addition, NJ TRANSIT is at varying levels of planning for development projects in Morristown, Elizabeth, both stations in Newark, Red Bank, Hopewell and South Amboy.

### **4. Functional Classification Studies**

It is universally recognized by highway agencies throughout the country that highway capacity and highway safety are directly affected by the degree of access control along the highway. All other things being equal, highways with restricted access (i.e., traffic permitted to enter and leave the highway only at selected, widely spaced locations, with no access to developments adjoining the highway) have substantially lower accident rates, and substantially higher traffic carrying capacities. Recognizing that highways serve two distinct functions, namely access to adjoining properties and accommodation of "through" traffic, the concept of functional classification has been formulated to differentiate among classes of highways in terms of the functions served. Each functional classification emphasizes more or less the through traffic function versus the property access function of the highway, with higher functional classification highways being those that are predominantly serving a through traffic function, and lower functional classification highways being those which serve predominantly an adjoining property access function.

The inherent differences between each functional classification warrant corresponding differences in the design standards and the criteria for access. While there is widespread agreement on this, actual conditions on many of the state's highways do not reflect the principal function that the highway serves. NJDOT believes a systematic examination of the state highway system is in order to define state



highways where design and access conditions do not properly reflect the highway's function. Where such conditions are found, efforts should be made to remedy these conditions. Such a systematic examination will be undertaken during the course of the short range plan time frame, with specific remedial actions defined as necessary.

## **5. Congestion Relief Studies**

### **a. Trans-Hudson Congestion Relief**

The Port Authority of New York and New Jersey has highlighted critical and growing problems associated with their transportation facilities across the Hudson River. After several years of slow growth, increased demand to cross the Hudson River by automobile has resulted in extensive delays during peak periods at the Holland Tunnel, the Lincoln Tunnel, and the George Washington Bridge. In addition, substantial growth on the PATH system, which connects points in Newark, Jersey City, and Hoboken with New York City, has resulted in intolerable congestion on many PATH trains. The congestion of the PATH system has the effect of reducing the quality of commuting for NJ TRANSIT rail riders, since the majority of them must transfer to PATH to complete their journey to New York City. Consequently, the Port Authority has undertaken extensive analyses to determine immediate, intermediate and long range prospective solutions to relieve these problems. Many of these prospective solutions lie outside the Port Authority's jurisdiction to implement, and consequently the Port Authority has actively enlisted the cooperation of NJ TRANSIT, NJDOT, and sister agencies in New York.

The thrust of most of these prospective solutions is to increase transit use by Trans-Hudson commuters. The degree to which these solutions will succeed in attracting increased transit use depends upon how much of an improvement users would realize in terms of directness of service, increased travel speed, service reliability, and service comfort.

To gauge the extent of improvement prospective solutions will offer, and to estimate use and costs to construct and operate, NJ TRANSIT and NJDOT are engaged in a number of project specific studies, with still others slated to begin within the short range plan time frame. These studies will enable the agencies to define which of the prospective solutions should be advanced to implementation. One of the primary objectives of these studies is to make more intensive use of the Northeast Corridor tunnel to Penn Station-New York to serve New Jersey commuters. This tunnel represents the last major underutilized transportation facility across the Hudson River to Manhattan and, as such, is a vital resource for attracting additional transit riders and relieving Trans-Hudson congestion problems. Moreover, recent and projected growth trends of employment in midtown Manhattan and housing growth in New Jersey suggest that added capacity for new riders will need to be provided.

The rail services that will run through the Northeast Corridor tunnel have the ability to markedly improve the attractiveness of public transit services because of the direct

rail service to midtown Manhattan that it can provide. Presently 16 trains operate through this tunnel in the peak hour, four (4) short of the capacity of 20 trains per hour. Services are provided by NJ TRANSIT's Northeast Corridor commuter line, NJ TRANSIT's North Jersey Coast Line, and Amtrak's intercity service. With a series of signal and track improvements, current capacity could be increased to upwards of 30 trains in the peak hour, thereby expanding the number of commuter corridors that can be served with direct service to midtown New York.

There are a variety of ways that existing excess capacity in the Northeast Corridor Tunnel and expanded capacity in the Tunnel (resulting from signal and track improvements) could be utilized. Services which presently operate into the tunnel (e.g. Northeast Corridor trains) could be increased, new connections which would permit such through service from electrified rail lines where this is not presently possible could be implemented (e.g. Kearny Connection), new connections and the deployment of dual powered locomotives which would permit through service from non-electrified lines could be implemented (e.g. the Secaucus Connection and use of dual powered locomotives on the Main/Bergen/Pascack Valley Lines), or some combination of the foregoing are all possible uses of excess capacity in the tunnel.

A brief description of the various study efforts relating to Trans-Hudson congestion relief (including the various efforts which are focused on increasing the use of the Northeast Corridor Tunnel) follows.

#### **(1) Kearny Connection**

Previous studies which have examined options for using existing and expanded excess capacity in the Northeast corridor tunnel indicate that the Kearny connection warrants priority consideration. The Kearny Connection would permit the operation of the new Morris & Essex trains into the Northeast corridor tunnel by virtue of a new track connection in Kearny. To advance the Kearny Connection, NJ TRANSIT will develop an engineering plan of the track connection, develop a train operating plan, develop current capital cost estimates for the connection and related signal improvements, refine projections of ridership and benefits, and confer with Amtrak, the owner of the Northeast Corridor line, to confirm the viability of the project.

#### **(2) Secaucus Transfer or Connection**

The Secaucus transfer would entail the construction of a rail station in Secaucus at the crossing of the Northeast Corridor Line and the Main/Bergen County Rail Lines. The purpose of the transfer would be to allow access from one part of NJ TRANSIT's rail system to another, and to provide transit access to residents and employees of adjoining developments in the Meadowlands. Its primary beneficiaries would be said residents and employees, and commuters who currently use the Main/Bergen County/Pascack Valley Line to Hoboken and transfer to PATH uptown to reach points in midtown Manhattan. By utilizing the transfer, these commuters would be able to shorten their commute time by transferring to a Northeast Corridor train bound for Penn Station-New York.



The Secaucus Connection would be an alternative to the transfer, and would entail a connecting track between the Main/Bergen County/Pascack Valley lines and the Northeast Corridor to permit trains on the former three lines to be through routed into Manhattan. Since these three lines are non-electrified, the connection would mean the deployment of dual powered locomotives on these three lines.

The transfer project is currently under study by a consultant commissioned by a developer owning the property upon which the project would be built, in cooperation with NJ TRANSIT, NJDOT, and HMDc.

### **(3) Dual Powered Locomotives**

The feasibility of dual powered, or dual-mode locomotives, is being assessed by NJ TRANSIT. This equipment would operate as diesel engines in diesel territory and switch to electric power in electric territory to enable service into Penn Station-New York from diesel lines, making direct, no-transfer New York service possible for the NJCL beyond the limits of electrification, the Raritan Valley Line, the Boonton Line (if the Kearny and Montclair Connections were built; discussed elsewhere in this section), and the Bergen/Main/Pascack (with the Secaucus Connection; also discussed elsewhere in this section).

### **(4) Montclair/Boonton Corridor**

A connection between the Boonton Line and the Montclair Branch, would provide continued rail service coverage on the Boonton Line if it should prove uneconomical to replace the existing Boonton Line bridge structures. Options without the connection would likely result in lower transit usage across the Hudson River. With the Kearny Connection and the use of dual powered locomotives, direct service to Penn Station-New York from the Boonton Line would become possible.

### **(5) West Shore**

This CONRAIL owned railroad right of way formerly accommodated commuter rail service which terminated in Weehawken at the now defunct Weehawken ferry. Commuter rail service ceased when the ferry stopped operating, and since then the right of way has been used exclusively for rail freight operations.

As Bergen County and Trans-Hudson traffic problems have become more pronounced over the past several years, interest in the resumption of commuter rail service along the West Shore has surged. This interest, coupled with the potential service West Shore could conceivably offer to the emerging, Hudson River Waterfront developments (discussed elsewhere in this section) has prompted NJDOT and NJ TRANSIT to conclude that serious consideration of such reinstituted service is warranted. Accordingly, UMTA funds for planning and engineering have been sought, and work will commence in early 1985. The completed work will set the stage for an implementation decision.



## **b. Construction Project Traffic Mitigation Plans**

With the passage of the Transportation Trust Fund, NJDOT is now in the position to begin addressing the massive backlog of rehabilitation needs on the state highway system. Rehabilitation projects are by their very nature disruptive, since they require traffic restrictions to enable the rehabilitation work to be undertaken. Where significant problems are likely to arise, the Department develops mitigation plans which, depending upon the particular circumstances, may include accelerated scheduling, restricted hours for construction work, the designation of alternate routes, and the promotion of carpooling, vanpooling, and transit use with associated park and ride lots. One such plan which is now being finalized — relating to a bridge redecking project on I-287 — embodies all of these mitigation measures. As the proportion of the Department's budget devoted to rehabilitation and the magnitude of funding for such rehabilitation increases, the need for mitigation plans will also increase. During the short range plan time frame, a number of major, reconstruction projects are anticipated which will require such mitigation plans.

## **c. Addressing Corridor and Localized Congestion Problems**

Later in the Transportation Plan, a comprehensive inventory of existing and anticipated future corridor and localized congestion problems is described. During the short range plan time frame, the Department expects to systematically examine such congestion problems, in descending order of priority, and to the extent that resources permit. The product of these investigations will be projects for NJDOT implementation beyond the life of the short range plan.

## **6. Resource Allocation Analysis**

To aid NJDOT in its efforts to allocate resources among types of highway projects, NJDOT Planning and Research staff will be deploying computer software developed by the Federal Highway Administration to examine alternative resource allocation scenarios and their long-term performance effects. NJDOT believes the refined application of this software can provide a more informed basis for determining proper levels of investment for different types of improvements, so as to maximize long-term benefits given a specified level of overall available funding. The software is presently being deployed, and further refinements during the short range plan time frame will be made to improve the quality of the results.

## **7. Freight Related Investigations**

### **a. Continuing Response to CONRAIL Abandonments**

As noted in the "major issues" section of the Transportation Plan, NJDOT has already mobilized to respond to proposed CONRAIL abandonments in an effort to protect the goods movement interests of the State. During the short range plan time frame, further abandonments are likely, necessitating continued analysis by NJDOT Freight Planning staff to gauge the economic importance of the proposed

abandonments, and to define appropriate remedial action. NJDOT expects to work closely with local governments and industry which would be affected by such abandonments, providing technical assistance, and to a limited degree financial assistance under the auspices of the Rail Freight Assistance Program for acquisition and improvement of threatened lines.

#### **b. Intermodal Facilities Study**

NJDOT is undertaking a study of the availability and adequacy of intermodal transfer facilities. The fastest growing segment of the rail industry is the intermodal traffic segment, because it combines the lower cost of long haul trip-making afforded by rail, and the flexibility of truck movement for local deliveries, thereby offering the cost advantages of rail services to industries which are not located adjacent to rail lines.

The objectives of the study are to inventory existing intermodal facilities, examine these facilities to define capacity restraints, and recommend short and long-term improvements to these facilities. The study will also examine growth areas of the state, and the long-term adequacy of existing intermodal facilities serving these areas.

### **8. Aviation Studies**

#### **a. Transportation Access to Newark Airport**

Newark International Airport is experiencing unprecedented airline and airline passenger growth, attributable in large part to the emergence of the "no frills" airline service now based at Newark Airport. Since 1978 the number of passengers using the Newark Airport has more than doubled, and it has surpassed LaGuardia Airport as the second busiest airport within the region. To accommodate future Newark Airport growth, improvements to landside access is likely to be necessary. To this end, NJ TRANSIT and the Port Authority are collectively undertaking an analysis of existing and future Newark Airport access needs, to develop short and long-term recommendations.

This study is being undertaken at a time when a substantial majority of Newark Airport air travelers access the airport by automobile. A 1978 in-flight survey revealed that 83 percent of air travelers at that time arrived at Newark Airport by automobile (in contrast to the other two major airports in the region, where automobile access accounts for a significantly smaller share of total air passenger air traffic). The predominance of automobile access traffic at Newark Airport is already causing congestion problems at the airport parking lots, which promise to get worse as traffic grows over time. Presently, the airport can be reached by public transit via bus services from the Port Authority Bus Terminal in Midtown Manhattan, Air Link from New York City, Jersey City, Hoboken, and Downtown Newark, and several other established regular route bus services. Prospective short-term solutions will likely involve improved traffic measures, modification and restructuring of bus routes and schedules (to be more responsive to airport arrival and departure patterns), expanded use of taxis, and possible new bus services with complementary park and ride facilities.



As noted previously, the study will also examine possible long-term solutions, involving more capital intensive, prospective rail services. Among these possibilities is the construction of a new, Northeast corridor station at McClellan Street with a transfer to airport terminal facilities.

#### **b. New Jersey Helicopter System Plan Study**

In the industrial northeast, helicopters are a rapidly growing form of transportation. In New Jersey, the high density of white collar corporate enterprise in the Philadelphia/New York corridor intensifies this demand. The placement of helicopter take-off/landing facilities is a sensitive issue, because of the dense development patterns within northeast New Jersey, and community concerns about the compatibility of helicopter facilities to other, neighboring land uses. To define future helicopter facility needs, and to identify suitable locations for accommodating these needs, a study will be undertaken by NJDOT.

### **9. Waterborne Studies**

Interest in port development and ferry services is undergoing a revival in Northeast New Jersey. A number of ferry service proposals have been advanced to address the growing Trans-Hudson congestion problems, and to facilitate the redevelopment of the New Jersey, Hudson River Waterfront. Site-specific analyses of such ferry service possibilities will continue to be performed as proposals arise, and supporting planning efforts will be undertaken to insure that landside access provisions to those services which are going to be implemented are in place. Two such ferry proposals are presently under serious consideration: a ferry service from Weehawken to Midtown Manhattan sponsored by ARCORP, a property developer with property holdings along the New Jersey, Hudson River Waterfront in Weehawken and West New York, and a ferry service linking Hoboken Terminal with Lower Manhattan.

### **10. Engineering Feasibility Studies**

A number of projects have advanced beyond the planning stage, and are either already in the midst of engineering feasibility studies, or will be during the short range plan time frame. These engineering feasibility studies are expected to define the next generation of projects for implementation beyond the short range plan time frame.

The most prominent of these engineering feasibility studies are enumerated below:

- Route 1 improvements between Trenton and New Brunswick in Mercer and Middlesex Counties.
- Routes 1/1&9 improvements between Pierson Avenue and East Scott Avenue in Middlesex and Union Counties.
- Route 3 improvements between Route 46/Garden State Parkway and Route 1&9 in Bergen and Hudson Counties.
- Route 4 improvements between Saddle River and Route I-95 in Bergen County.



- Route 10 improvements between the Ledgewood Circle and Franklin Road and Route 53 and Johnson Road in Morris County.
- Route 17 improvements between Route 46 and the New York State line in Bergen County.
- A prospective extension of Route 17 from the present southernmost terminus of Route 17 at Route 3 and the vicinity of I-280 in Bergen and Hudson Counties.
- A prospective extension to Route 18 from the Raritan River to I-287 in Middlesex County.
- The completion of Route 18 in Monmouth County.
- Route 18 improvements between Route 1 and the New Jersey Turnpike in Middlesex County.
- A prospective extension of Route 21 between Monroe Street and I-80 in Bergen and Passaic Counties.
- Route 30 improvements between the Garden State Parkway and the Camden County line in Atlantic County.
- Route 31 improvements between the Flemington Circle and Route 46 in Hunterdon and Warren Counties.
- Route 33 improvements between Mercerville and Robbinsville in Mercer County.
- Route 70 improvements between Route 38 and Route 73 in Burlington and Camden Counties.
- Route 80 improvements between I-287 and New Road in Morris County.
- Construction of the Route 92 Freeway in Mercer, Middlesex, and Somerset Counties.
- Route 147 improvements between Route 9 and New Jersey Avenue in Cape May County.
- Route 206 improvements between Route 518 and the Somerville Circle in Somerset County.
- Route 206 improvements from Bridgewater Township north to Route I-80 in Somerset and Morris Counties
- Route 206 improvements north of Route I-80 through Byram, Andover, Hampton and Frankford Townships in Sussex County
- Route I-287 widening between Route I-78 and Morristown in Somerset and Morris Counties
- Triborough Road/Eisenhower Parkway completion in Morris and Essex Counties.
- Construction of the Somerset Expressway in Somerset County.
- MetroPark Parking expansion study in Woodbridge, Middlesex County.

## **VI. LONGER RANGE AND CONTINUING NEEDS**

Previous sections of the plan described the condition and use of New Jersey's transportation system and a short-range plan which will address many of the state's existing transportation problems. While the short-range plan represents significant progress in remedying problems on the state's transportation system, many problems will remain and still others will materialize after the short-range plan is implemented. In this section of the plan, needs which the short-range plan will not address entirely, or at all, are described. Projects to address these needs are candidates for longer term implementation.

While this section discusses future transportation needs, it departs from previous transportation plans proposed by the state as it discusses these needs in terms of problems to be addressed instead of projects or solutions to be implemented. As noted in I. Introduction, past experience has shown that projects conceived at the transportation plan stage are often falsely premised, and subject to wholesale changes or outright elimination once the problems they purport to solve are examined more closely.

The inventory of problems that follows is necessarily limited to surface passenger transportation, as the state's role in both freight services and aviation is primarily complementary to and supportive of private initiatives. Consequently, the state at this time has not assumed a role of identifying a comprehensive inventory of needs for either of these transportation sectors.

### **A. Problem Assessment Process**

NJDOT has established a process to systematically identify, order in terms of priority, and assess observable problems in order to define projects. For purposes of this process, problems are assigned to seven categories:

- Area or Corridorwide Congestion Problems
- Spot Congestion Problems
- Bridge Problems
- Safety Related Roadway Problems
- Perceived Park-Ride Needs
- Resurfacing Needs
- Future Area or Corridorwide Congestion Problems in High Growth Areas

A brief description of each of the categories and extent of the inventory follows:

#### **1. Area or Corridorwide Congestion Problems**

There are numerous highways throughout the state that routinely experience traffic congestion over long expanses of road, especially during commuting hours, prompting

proposals for roadway widening, bypass routes, etc. This type of problem will often warrant costly improvements, but also provides in many instances considerable opportunity for transportation systems management (TSM) remedies.

## **2. Spot Congestion Problems**

Localized traffic bottlenecks are characteristic of spot problems, generally prompting proposals for grade separation of at-grade intersections, upgrading of existing grade separations to increase capacity, intersection approach widenings, etc. Since the problem is localized, the affected area and the repercussions of the improvement options are usually confined.

## **3. Bridge Problems**

This category includes all bridge problems, which are defined by the use of "sufficiency ratings." The sufficiency rating includes, among other factors, measures of congestion and safety. A detailed description of the rating methodology can be found in "Recording and Coding Guide for the Structure, Inventory and Appraisal of the Nations' Bridges", USDOT/FHWA, January 1979.

## **4. Safety Related Roadway Problems**

This can be either a localized or more pervasive problem exhibiting any of the following more specific sources of concern: poor drainage; poor traction; deficient or absent shoulders; roadside hazards; sight distance restrictions; poor horizontal or vertical alignment; etc.

## **5. Perceived Park-Ride Needs**

Such needs become apparent where ad hoc parking use by commuters becomes a source of irritation or concern (e.g. where merchants complain about unauthorized use of patron parking spaces by commuters, or where non-resident parkers encroach on either privately or publicly owned existing parking facilities to the detriment of authorized users.)

## **6. Resurfacing Needs**

Pavement has a limited life and must be properly maintained to maximize its usable life, and ultimately reconstructed at the end of its usable life. This is a continuing process, so that at any given time pavement maintenance and reconstruction efforts are occurring. This category encompasses such pavement related needs.

## **7. Future Area or Corridorwide Congestion Problems in High Growth Areas**

This category features emerging highway congestion problems in high growth areas of the state. Such problems must be identified early enough to allow ample lead time for defining and implementing solutions.



## **B. Problem Inventory**

The discussions which follow present exhaustive inventories of problems in certain categories, and no inventories at all for other categories. Where no inventories are presented, the discussion focuses on the peculiarities of that particular category of problem, and the procedures used by the Department to define associated projects on a recurring basis. This distinction is necessitated by the fact that certain types of problems lend themselves to long-range identification and analysis, while others are identified and addressed on a much shorter time basis. For those categories where an inventory of problems has been identified, the inventory includes problem solutions which are only partially addressed in the short-range plan.

### **1. Area or Corridorwide Congestion Problems**

NJDOT has identified an extensive inventory of real and perceived existing congestion problems. These problems include congestion deficiencies identified by analysis of each state highway's volume/capacity relationship, and congestion deficiencies identified by observation. Also, a series of closely spaced spot congestion problems are defined as a corridor congestion problem as well. The short-range plan discussed in the preceding section will address a number of these congestion problems; those which will remain constitute the inventory of future problems to be addressed. These problems are identified in Figure 18\* and listed in Appendix 1. The priority ranking provides an identification of the perceived severity of the problems and will serve as a guide to determining the order in which these problems are addressed.

### **2. Spot Congestion Problems**

Figure 19\* and Appendix 2 indicate spot congestion problems which will remain subsequent to the implementation of the short-range plan. In several cases, spot problems are located within congestion corridors having solutions expected to be partially funded during the term of the Short-Range Plan. Since it is, in many cases, too premature to define which spot problems will be addressed with the funds allocated in the Short-Range Plan, all spot problems located in such corridors are noted accordingly in Figure 19\*.

### **3. Bridge Problems**

As noted in the category description, this category of problems is identified through the use of sufficiency ratings. The NJDOT annually produces a "bridge select list" which identifies deficient bridges not meeting specific criteria for structural and functional integrity. This annual listing is a key determinant in deciding the order in which bridge problems are addressed. Figure 20\* and Appendix 3 indicate those bridge problems which will remain subsequent to the short-range plan.

### **4. Safety Related Roadway Problems**

Problems in this category of needs include: locations of demonstrated high

\* Maps located at the end of this section.

frequencies of accidents; and locations that have characteristics conducive to high accident potential. Problems of both types are systematically identified and addressed by NJDOT.

Relative to the first type of safety problem, the Department maintains an on-going program that identifies high accident locations in terms of number and type of accidents in the state based on police submitted accident reports. The reports are computerized to aid in analyzing the 60,000 accidents which occur annually on the state system. For these types of problems, solutions are developed for the most hazardous locations and implemented as quickly as resources permit.

Potential accident locations are identified by surveying the highway system to determine highway locations having characteristics similar to locations with known accident problems or highway locations which do not meet current design standards for safe highways. This type of problem is frequently remedied as part of overall reconstruction projects.

Because safety problems are defined in terms of accident data which is updated annually, and because solutions to accident problems tend not to require long lead times to implement (except where they coincide with other, more pervasive problems), the Department does not maintain a comprehensive inventory of safety type problems. Instead, each year's safety program is developed with the latest data and reflects the most critical needs at that time.

## **5. Perceived Park-Ride Needs**

Here again, the Department does not maintain a comprehensive inventory of problems, electing instead to respond to needs as they arise. This can (and does) happen in several ways. First, the Department frequently receives requests for the creation of park-ride lots as a result of the Department's ridesharing promotional program or in response to informal arrangements entered into by the public. Second, where ad hoc park and ride arrangements become a nuisance to property owners, neighbors, merchants, etc., the Department is often requested to make alternate park-ride arrangements. Third, where the Department finds that substantial park-ride potential exists during the course of planning and designing a highway improvement, park-ride provisions are incorporated as an element of the improvement. Finally, park-ride facilities are being implemented by the Department as part of traffic mitigation plans to relieve traffic problems during highway construction.

## **6. Resurfacing Needs**

Historically, the New Jersey Department of Transportation has relied on a subjective process for identifying pavements in need of resurfacing or rehabilitation. Typically, candidate projects were selected by the Department's engineering staff based on judgments regarding a pavement's overall condition. Because the Department is interested in assembling an overall profile of pavement conditions and measure of



overall pavement performance trends, several years ago the Department decided that a more formalized, quantitative procedure for assessing pavement condition is necessary.

Accordingly, the Department initiated a research study in 1982 to develop such a process. This research is part of a larger, general effort to implement an improved Pavement Management System (PMS) in New Jersey. A Pavement Management System is a set of methods to assist decision-makers in finding optimum strategies for maintaining pavements in a servicable condition. The basic goals of pavement management are to improve the efficiency of decision-making, provide feedback on the consequences of decisions, facilitate the coordination of activities within the Department, and insure the consistency of decisions made at different management levels.

A primary objective of the research is to develop rating criteria or models for evaluating the condition of New Jersey pavements using objective, systemwide test data. One such model, implemented in 1983, provides an index of pavement condition in terms of three basic parameters: pavement rideability, physical distress (e.g., the severity and extent of cracking, patching, and rutting), and traffic volume. Application of this model yields an annual listing of candidate resurfacing projects. This listing of excessively rough/distressed pavements is a basic source document used by senior Department managers in developing an annual coordinated program of pavement resurfacing and rehabilitations that will best serve the interests of the motoring public.

Other significant topics being addressed in the research include development of safety, performance and economic analysis models. The safety model will provide a separate listing of candidate resurfacings based on various measures of roadway safety (e.g., accident frequency, pavement skid resistance). The performance model is a tool for estimating the service lives of various types of New Jersey pavements and will primarily be used to develop projections of future network condition and associated resurfacing requirements. The economic analysis model is intended to provide a basis for estimating the future costs to the Department and the motoring public for alternative resurfacing programs/strategies.

## **7. Future Area or Corridorwide Congestion Problems in High Growth Areas**

This category recognizes that there are several areas or highway corridors in the state experiencing growth in development and highway traffic that is significantly greater than that which normally occurs. The magnitude of this growth not only has the potential to severely overtax existing highway facilities but could shorten the useful life of highway improvements included in the short-range plan as well.

To address this potential, the NJDOT feels that it is important to identify and monitor the growth in these areas/corridors. If significant, the Department would then undertake a comprehensive study of the area/corridor and identify potential problems



with enough lead time so that remedial actions could be developed and implemented in a timely fashion.

To identify this category of problems, the NJDOT combined known growth areas of the state, such as the Route 1 Corridor and the Hudson River Waterfront, with an analysis of the development activity currently occurring along the state highway system. The results of this analysis are depicted in Figure 21. Studies of several growth areas are already underway, and others will be undertaken on a continuing basis as necessary.

**FIGURE 18-1**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 1**  
**AREA OR CORRIDORWIDE CONGESTION PROBLEMS**  
**BERGEN, ESSEX AND HUDSON COUNTIES**



**LEGEND**

- PROBLEM SOLUTION FUNDED  
TOTALLY IN SHORT-RANGE PLAN
- REMAINING PROBLEMS**
- PRIORITY 1 (PARTIALLY FUNDED IN SHORT-RANGE PLAN)
- PRIORITY 1 (NOT FUNDED IN SHORT-RANGE PLAN)
- PRIORITY 2
- PRIORITY 3
- 16 LOCATION NUMBER KEYED TO APPENDIX 1



**FIGURE 18-2**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 1**  
**AREA OR CORRIDORWIDE CONGESTION PROBLEMS**  
**MORRIS, PASSAIC, SUSSEX AND WARREN COUNTIES**

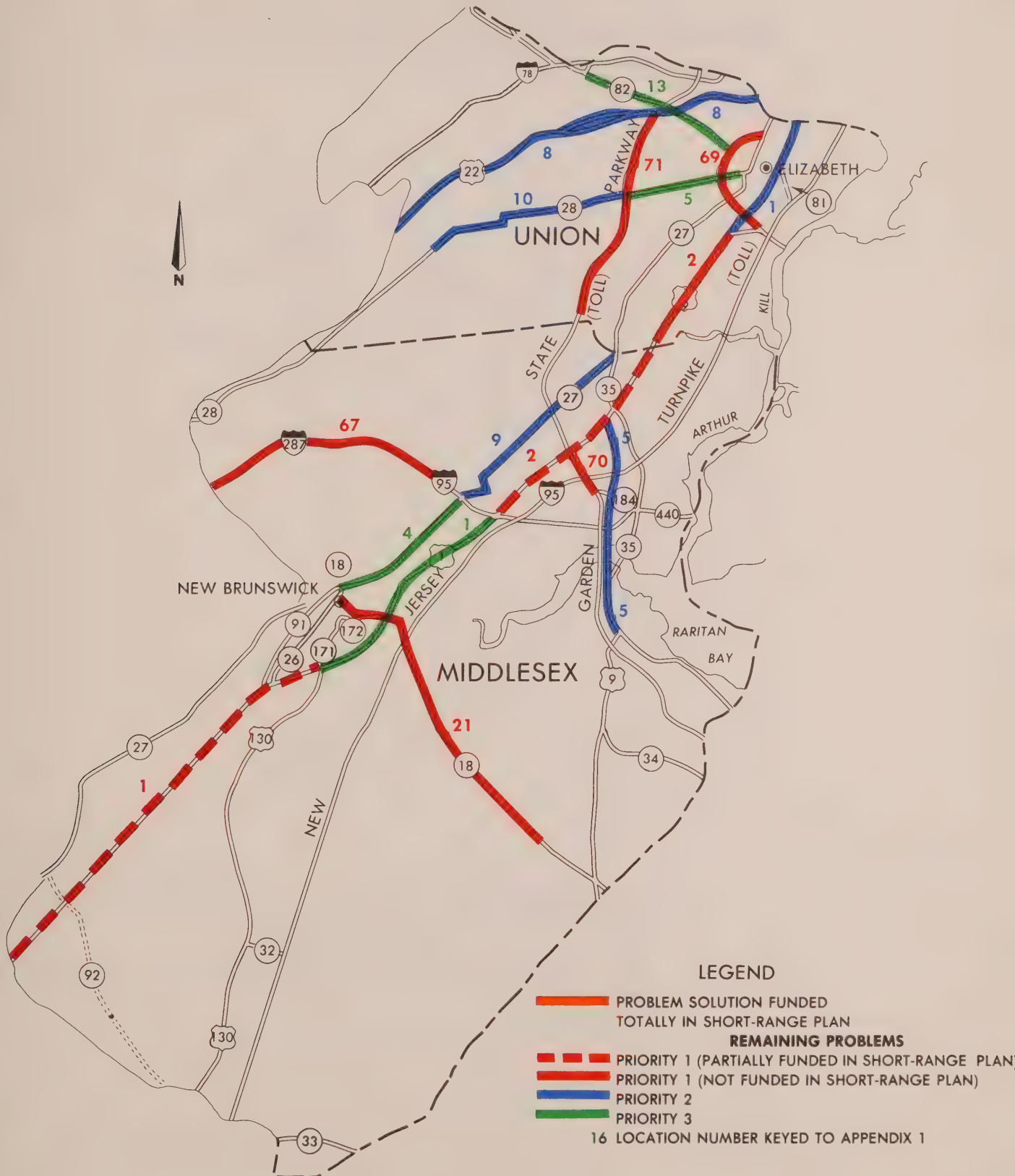


**LEGEND**

- PROBLEM SOLUTION FUNDED  
TOTALLY IN SHORT-RANGE PLAN
- REMAINING PROBLEMS**
- - - PRIORITY 1 (PARTIALLY FUNDED IN SHORT-RANGE PLAN)
- PRIORITY 1 (NOT FUNDED IN SHORT-RANGE PLAN)
- PRIORITY 2
- PRIORITY 3
- 16 LOCATION NUMBER KEYED TO APPENDIX 1



**FIGURE 18-3**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 1**  
**AREA OR CORRIDORWIDE CONGESTION PROBLEMS**  
**MIDDLESEX AND UNION COUNTIES**



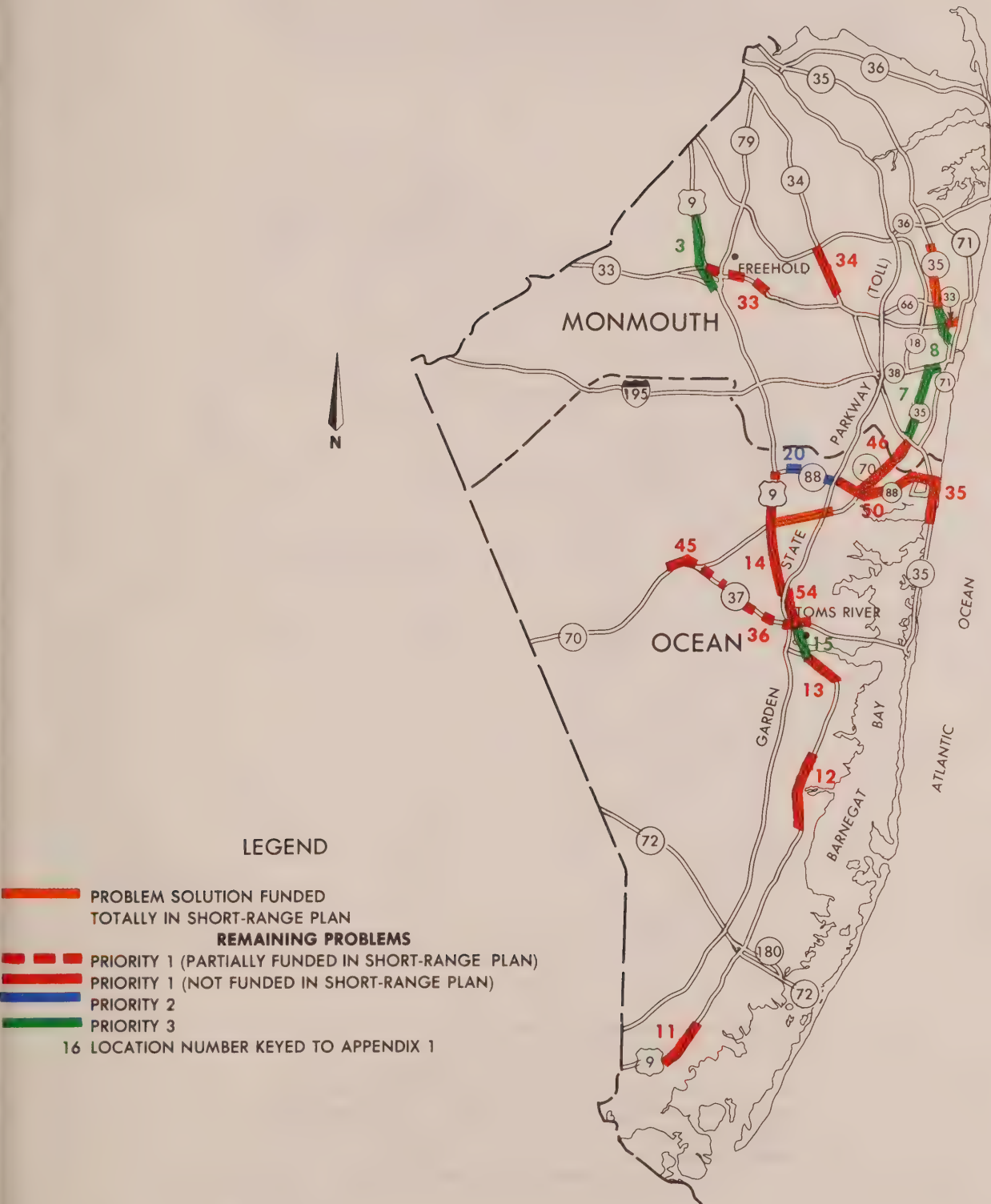
**FIGURE 18-4**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 1**  
**AREA OR CORRIDORWIDE CONGESTION PROBLEMS**  
 HUNTERDON, MERCER AND SOMERSET COUNTIES



**LEGEND**

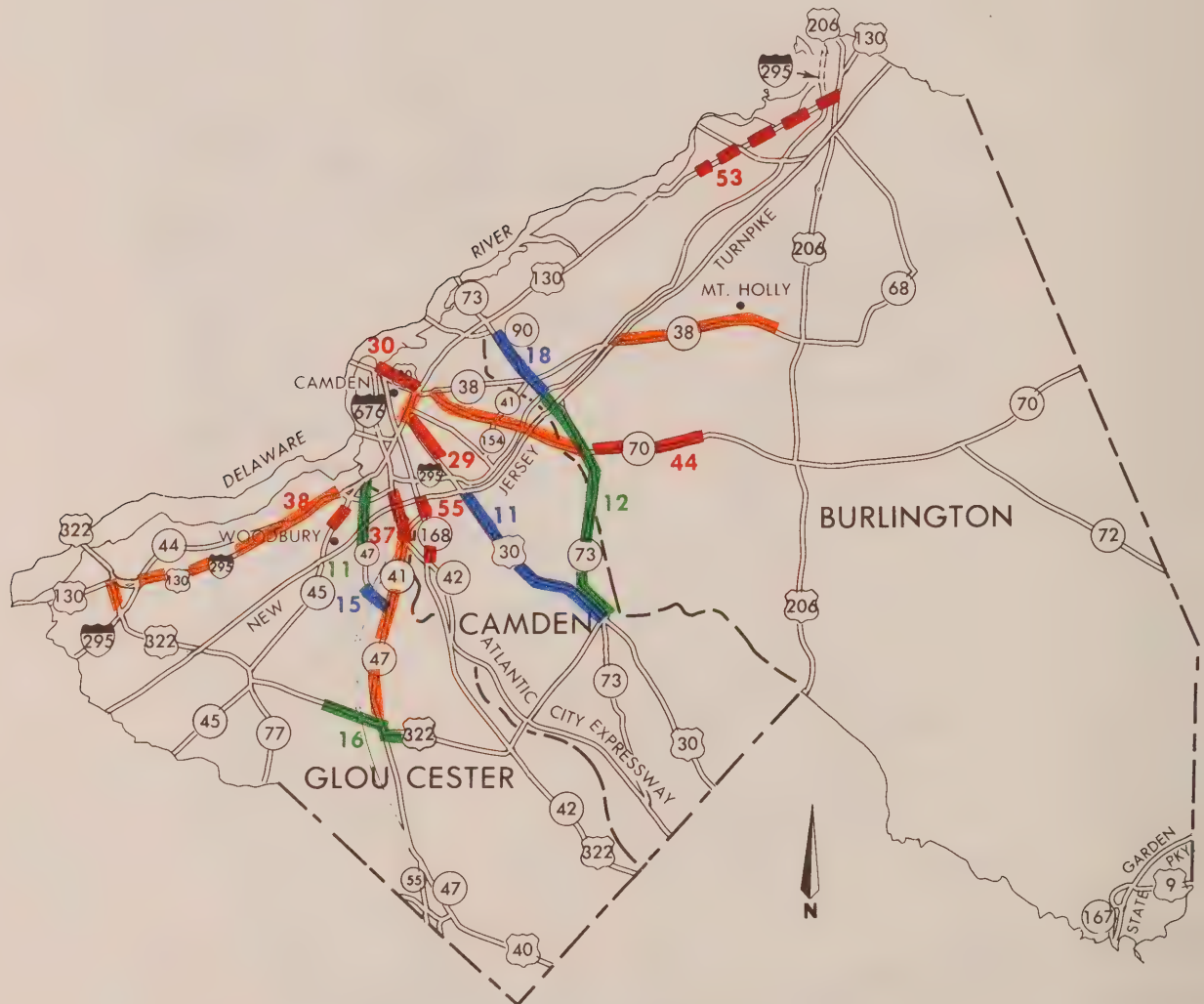
- PROBLEM SOLUTION FUNDED  
TOTALLY IN SHORT-RANGE PLAN
- REMAINING PROBLEMS**
- PRIORITY 1 (PARTIALLY FUNDED IN SHORT-RANGE PLAN)
- PRIORITY 1 (NOT FUNDED IN SHORT-RANGE PLAN)
- PRIORITY 2
- PRIORITY 3
- 16 LOCATION NUMBER KEYED TO APPENDIX 1

**FIGURE 18-5**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 1**  
**AREA OR CORRIDORWIDE CONGESTION PROBLEMS**  
 MONMOUTH AND OCEAN COUNTIES





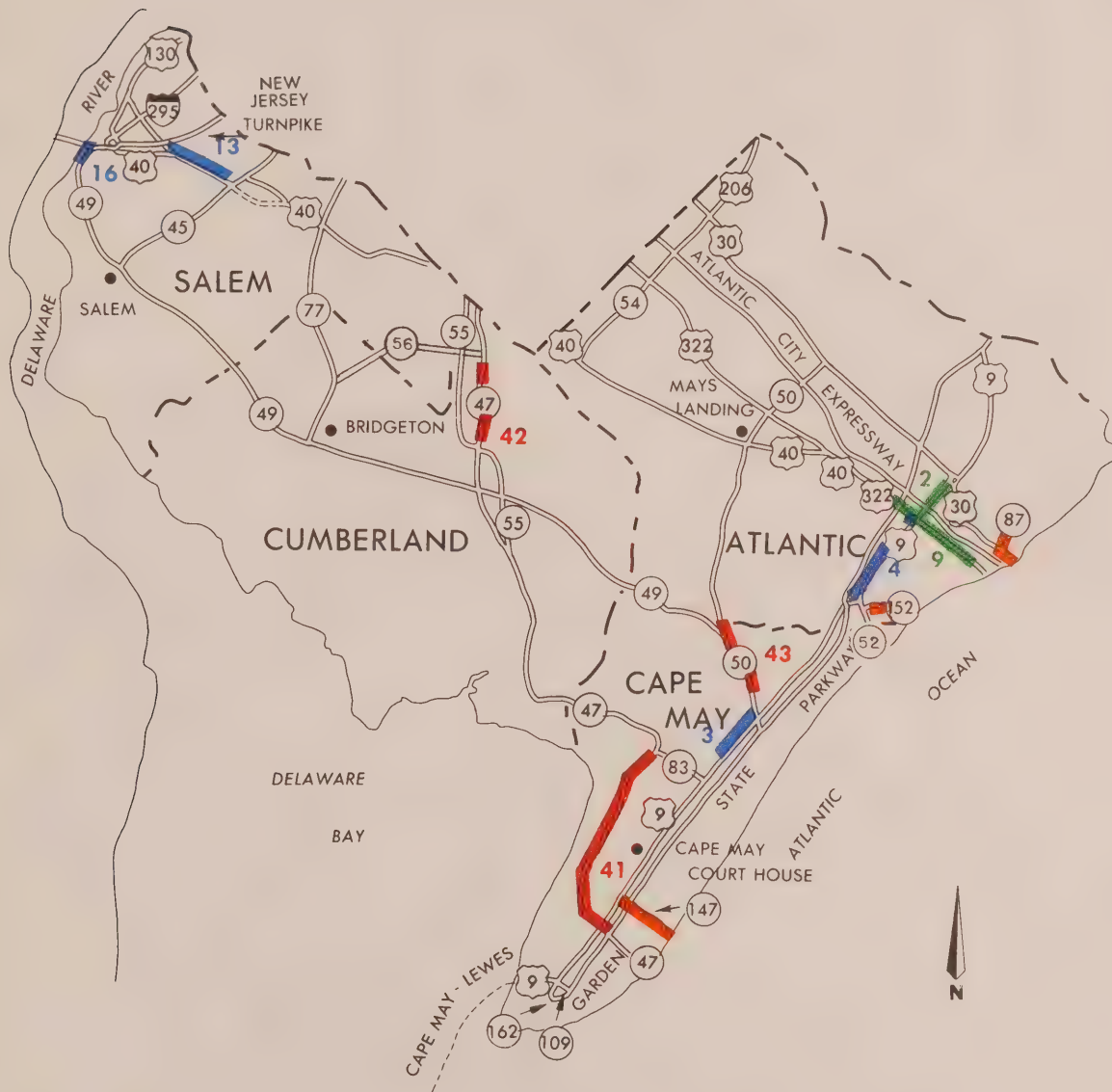
**FIGURE 18-6**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 1**  
**AREA OR CORRIDORWIDE CONGESTION PROBLEMS**  
 BURLINGTON, CAMDEN AND GLOUCESTER COUNTIES








**LEGEND**

- PROBLEM SOLUTION FUNDED  
TOTALLY IN SHORT-RANGE PLAN
- REMAINING PROBLEMS**
- - - PRIORITY 1 (PARTIALLY FUNDED IN SHORT-RANGE PLAN)
- PRIORITY 1 (NOT FUNDED IN SHORT-RANGE PLAN)
- PRIORITY 2
- PRIORITY 3
- 16 LOCATION NUMBER KEYED TO APPENDIX 1

ATLANTIC, CAPE MAY, CUMBERLAND AND SALEM COUNTIES



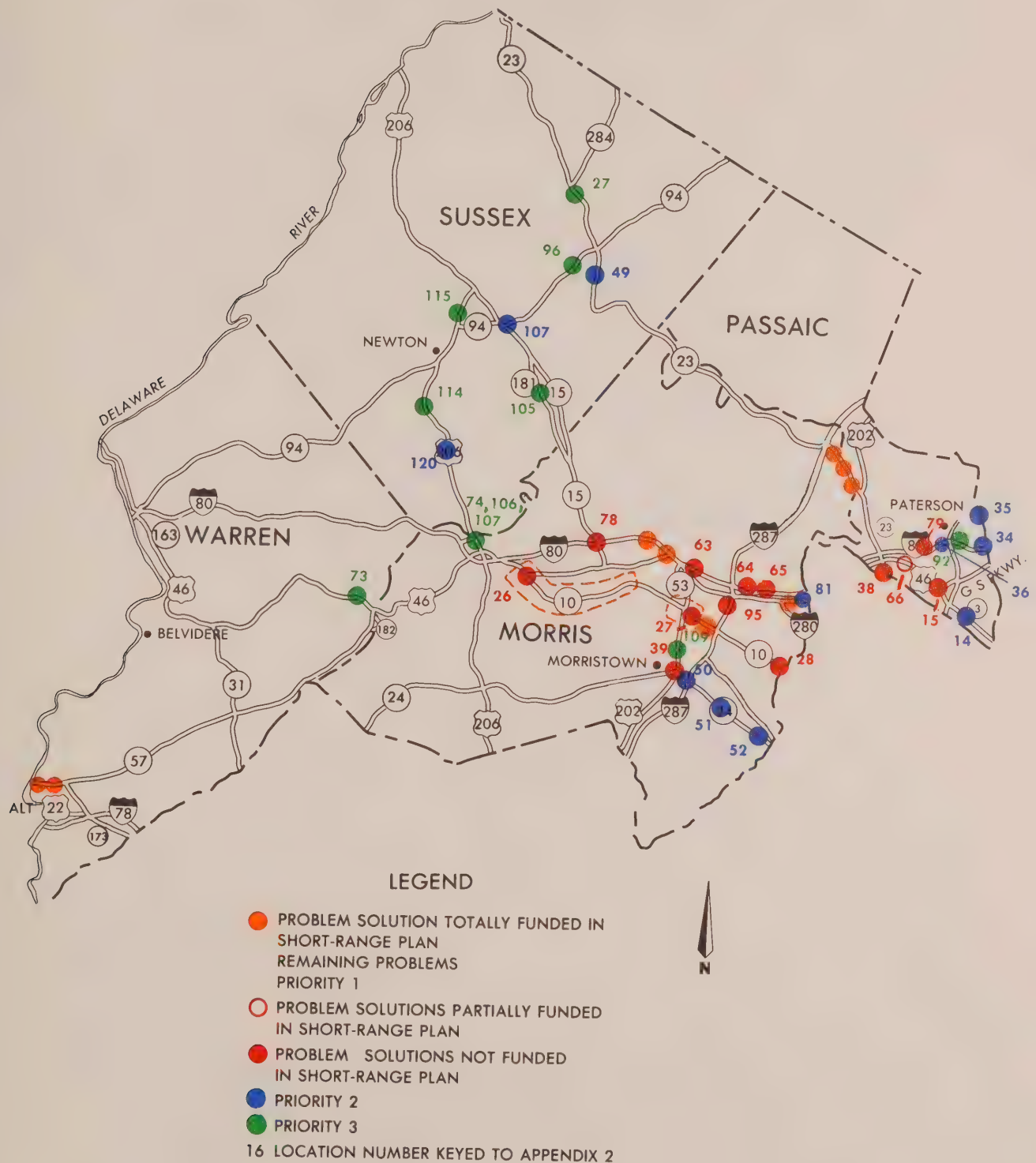
### LEGEND

-  PROBLEM SOLUTION FUNDED  
 TOTALLY IN SHORT-RANGE PLAN  
**REMAINING PROBLEMS**  
 PRIORITY 1 (PARTIALLY FUNDED IN SHORT-RANGE PLAN)  
 PRIORITY 1 (NOT FUNDED IN SHORT-RANGE PLAN)  
 PRIORITY 2  
 PRIORITY 3  
 16 LOCATION NUMBER KEYED TO APPENDIX 1



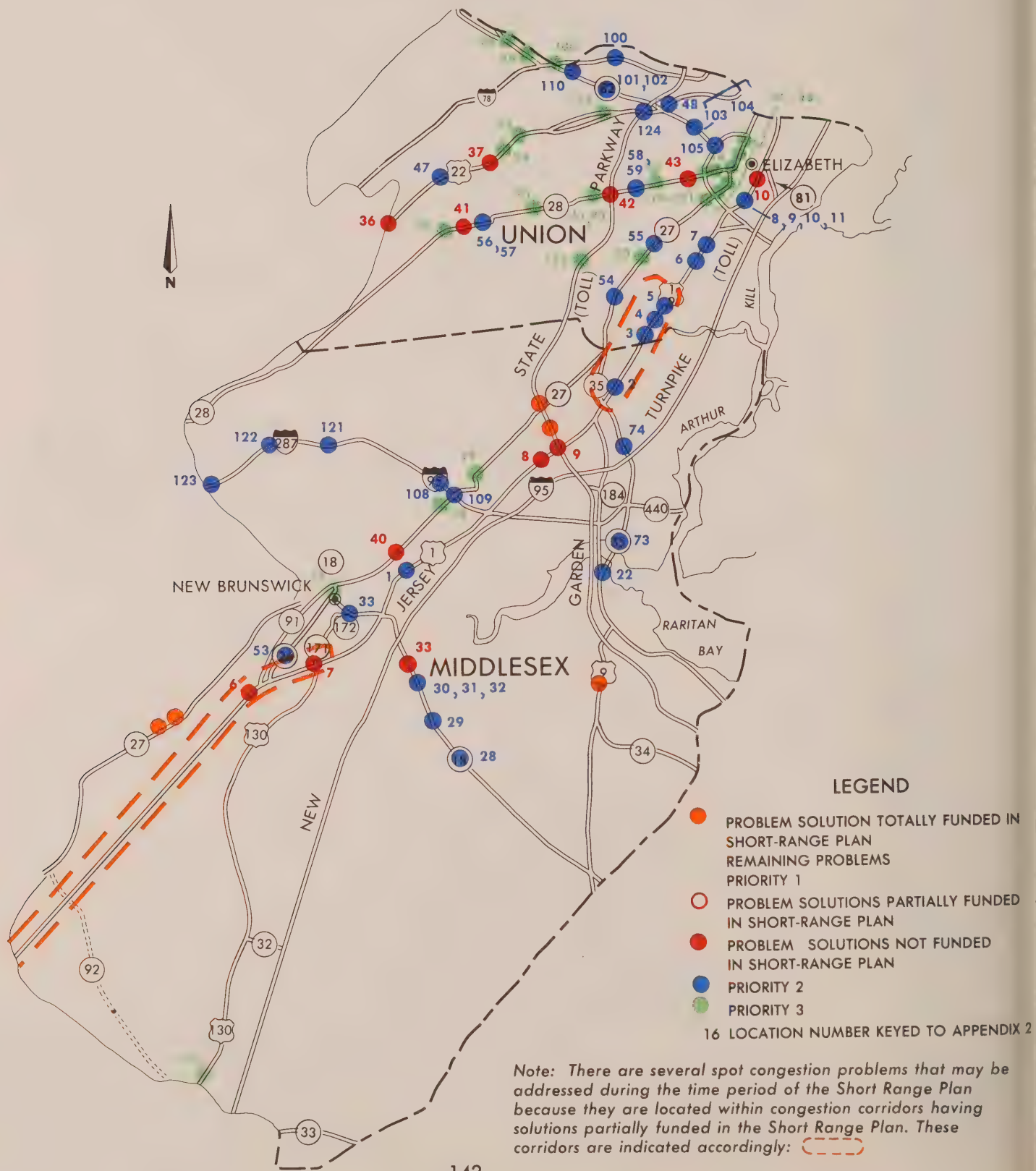


**FIGURE 19-2**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 2**  
**SPOT CONGESTION PROBLEMS**  
**MORRIS, PASSAIC, SUSSEX AND WARREN COUNTIES**

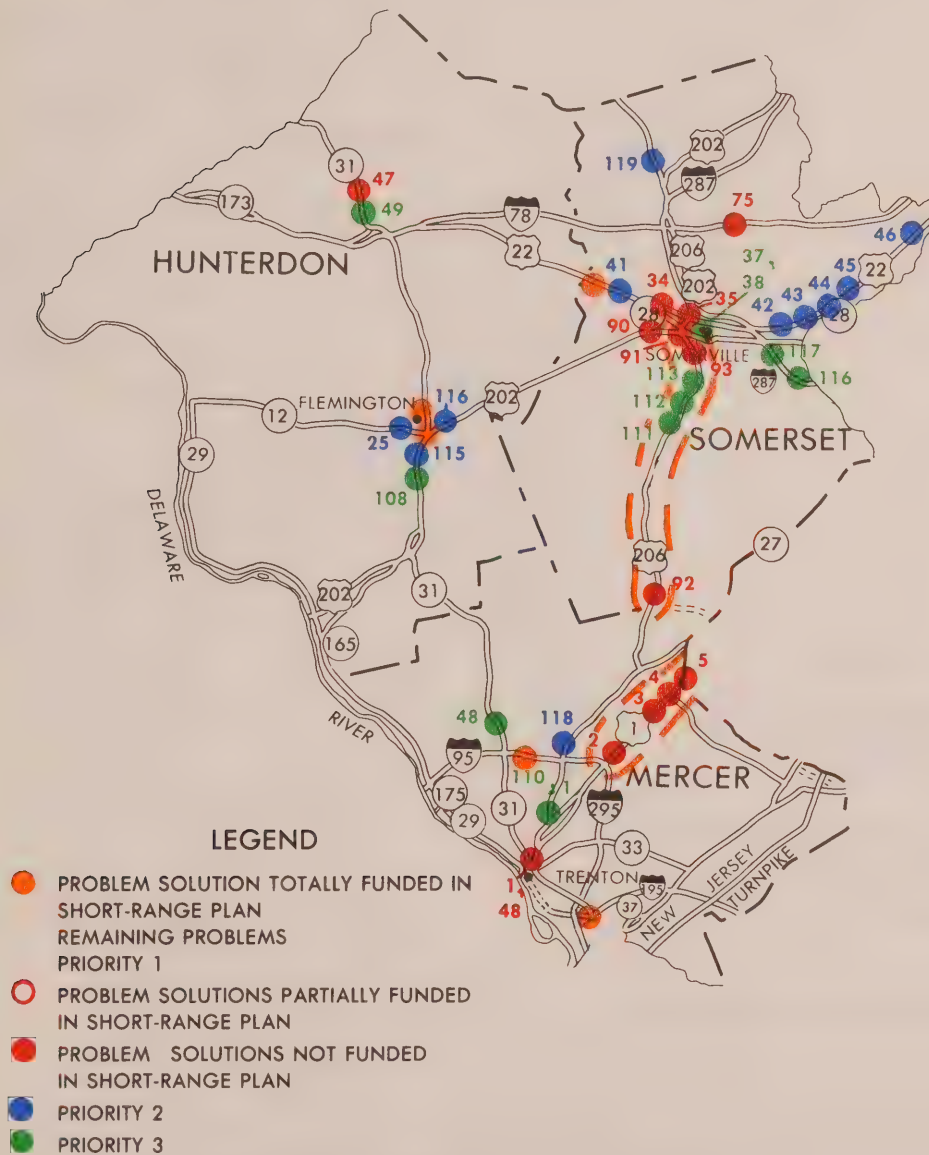


*Note: There are several spot congestion problems that may be addressed during the time period of the Short Range Plan because they are located within congestion corridors having solutions partially funded in the Short Range Plan. These corridors are indicated accordingly:*

**FIGURE 19-3**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 2**  
**SPOT CONGESTION PROBLEMS**  
**MIDDLESEX AND UNION COUNTIES**



**FIGURE 19-4**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 2**  
**SPOT CONGESTION PROBLEMS**  
 HUNTERDON, MERCER AND SOMERSET COUNTIES

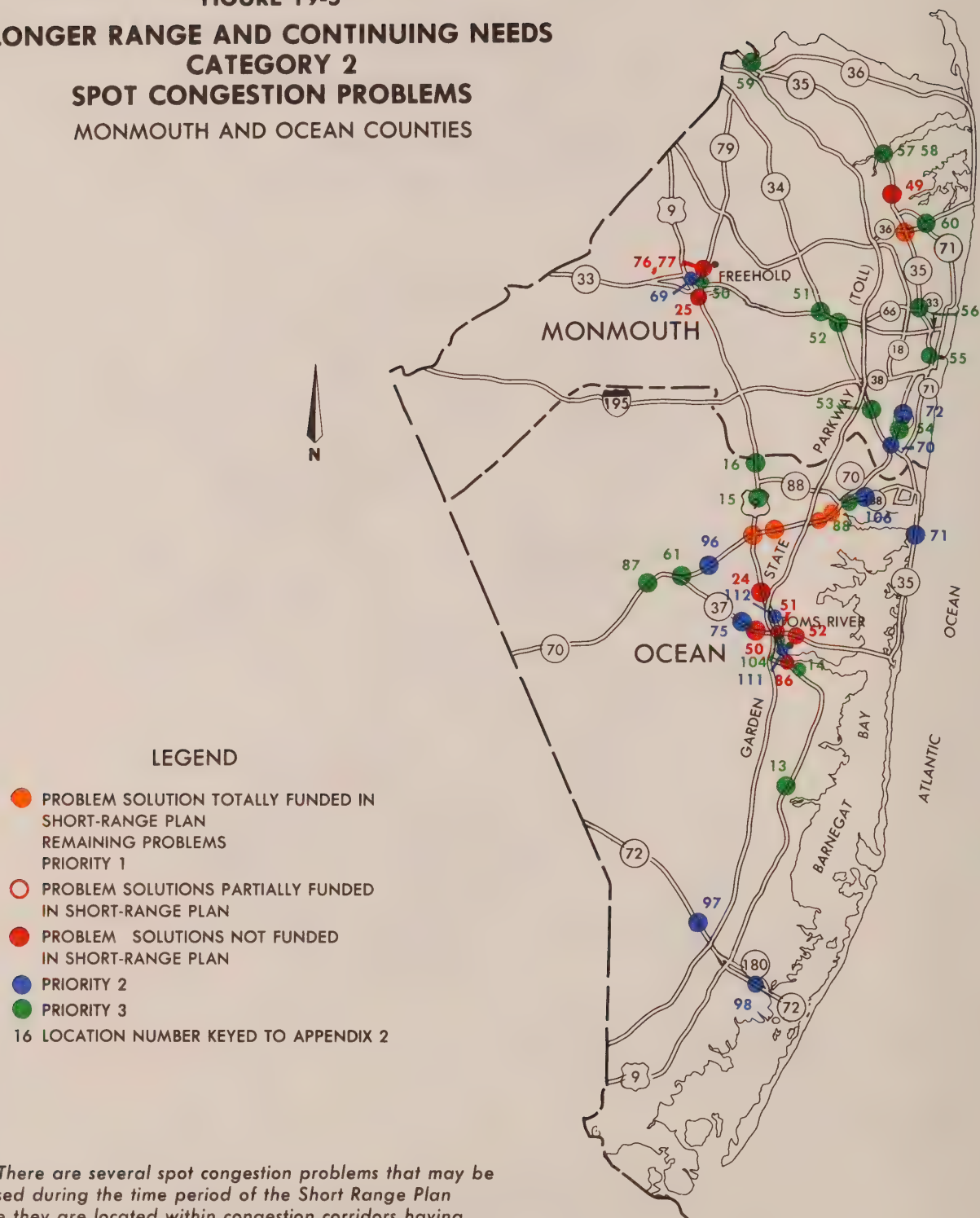



16 LOCATION NUMBER KEYED TO APPENDIX 2

*Note: There are several spot congestion problems that may be addressed during the time period of the Short Range Plan because they are located within congestion corridors having solutions partially funded in the Short Range Plan. These corridors are indicated accordingly: ---*

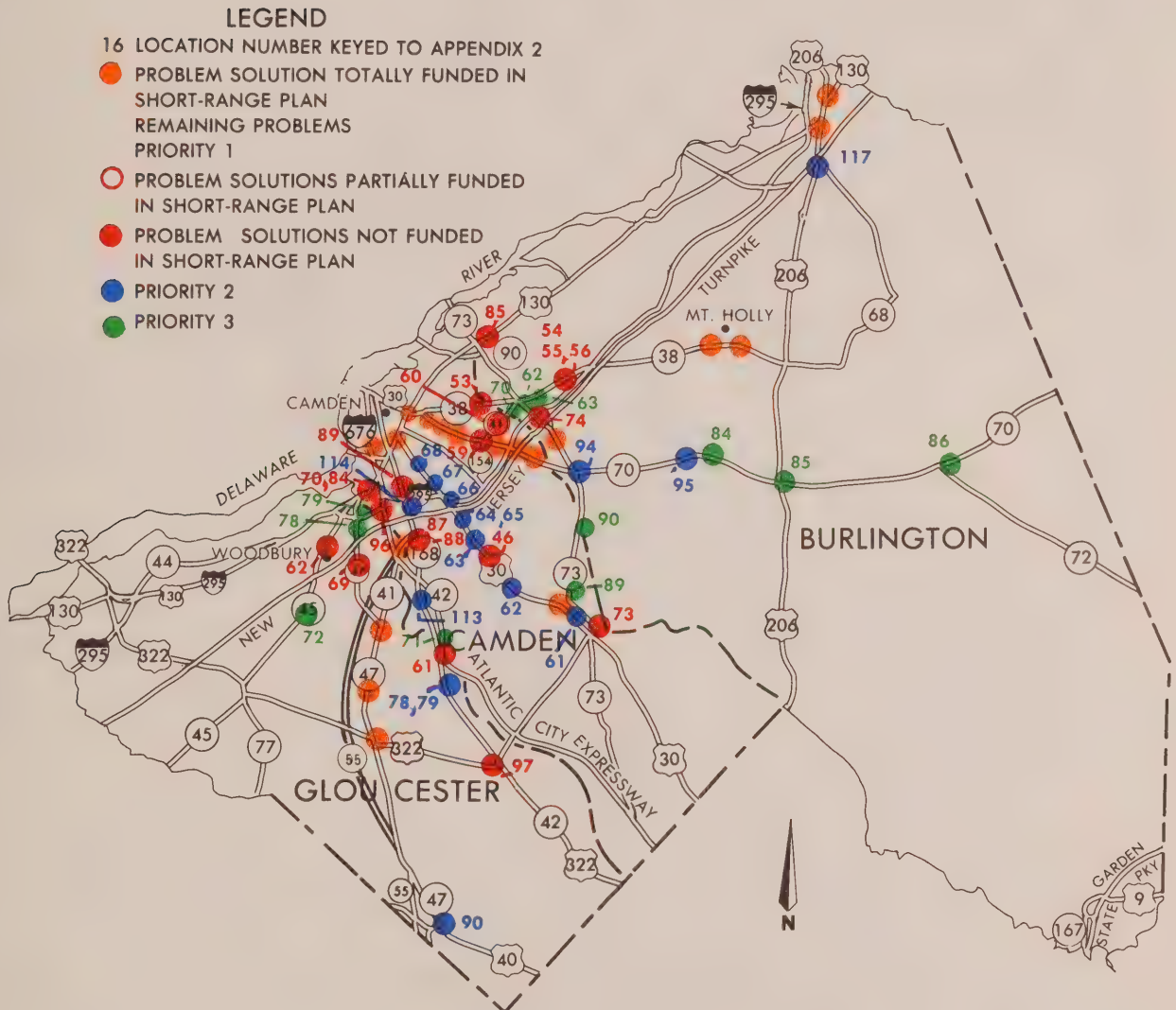


**FIGURE 19-5**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 2**  
**SPOT CONGESTION PROBLEMS**  
**MONMOUTH AND OCEAN COUNTIES**



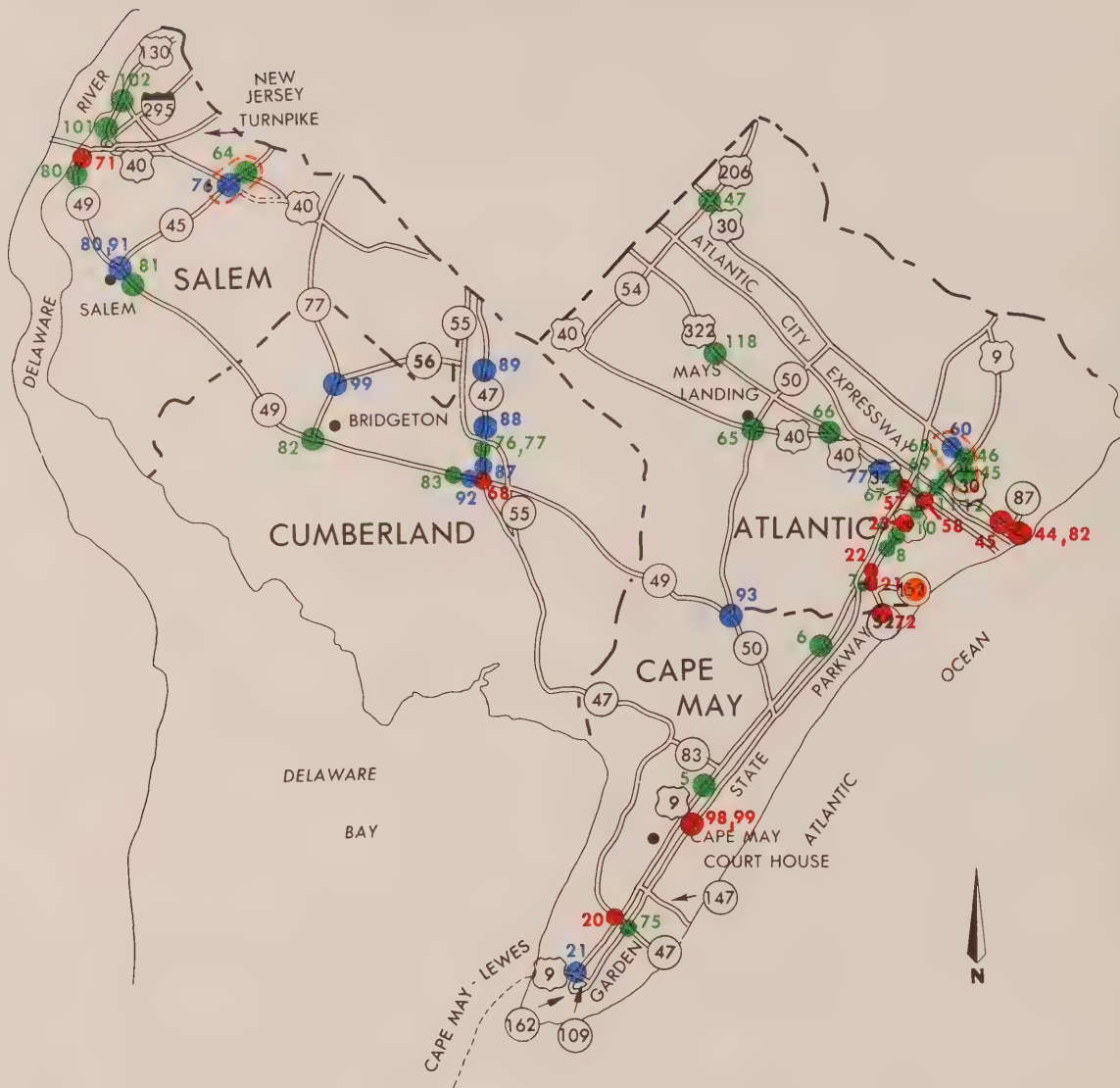
*Note: There are several spot congestion problems that may be addressed during the time period of the Short Range Plan because they are located within congestion corridors having solutions partially funded in the Short Range Plan. These corridors are indicated accordingly: *

**FIGURE 19-6**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 2**  
**SPOT CONGESTION PROBLEMS**  
**BURLINGTON, CAMDEN AND GLOUCESTER COUNTIES**



*Note: There are several spot congestion problems that may be addressed during the time period of the Short Range Plan because they are located within congestion corridors having solutions partially funded in the Short Range Plan. These corridors are indicated accordingly:*

ATLANTIC, CAPE MAY, CUMBERLAND AND SALEM COUNTIES



## LEGEND

- PROBLEM SOLUTION TOTALLY FUNDED IN SHORT-RANGE PLAN  
REMAINING PROBLEMS  
PRIORITY 1
  - ◉ PROBLEM SOLUTIONS PARTIALLY FUNDED IN SHORT-RANGE PLAN
  - PROBLEM SOLUTIONS NOT FUNDED IN SHORT-RANGE PLAN
  - PRIORITY 2
  - PRIORITY 3
- 16 LOCATION NUMBER KEYED TO APPENDIX 2

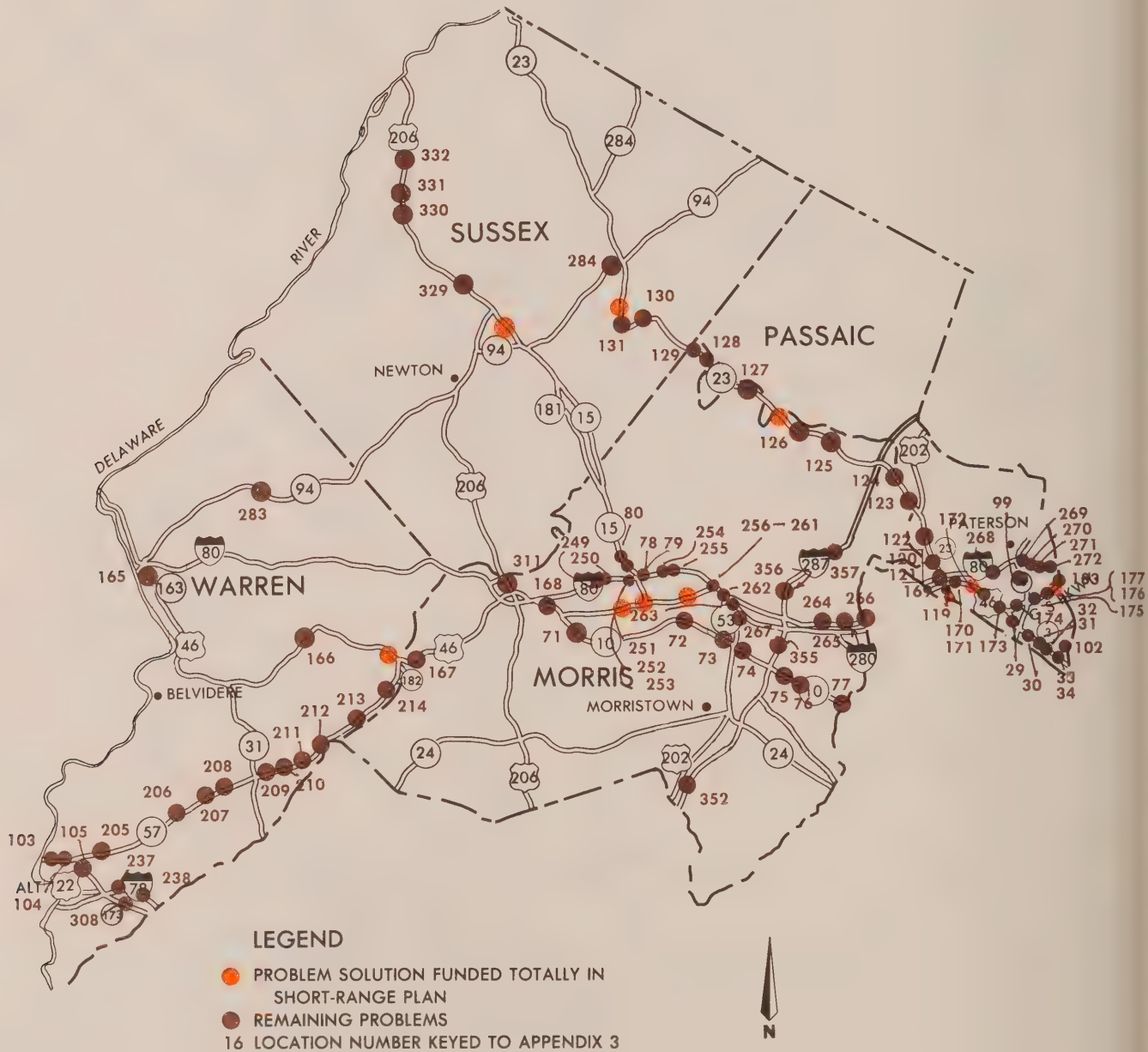
Note: There are several spot congestion problems that may be addressed during the time period of the Short Range Plan because they are located within congestion corridors having solutions partially funded in the Short Range Plan. These corridors are indicated accordingly:



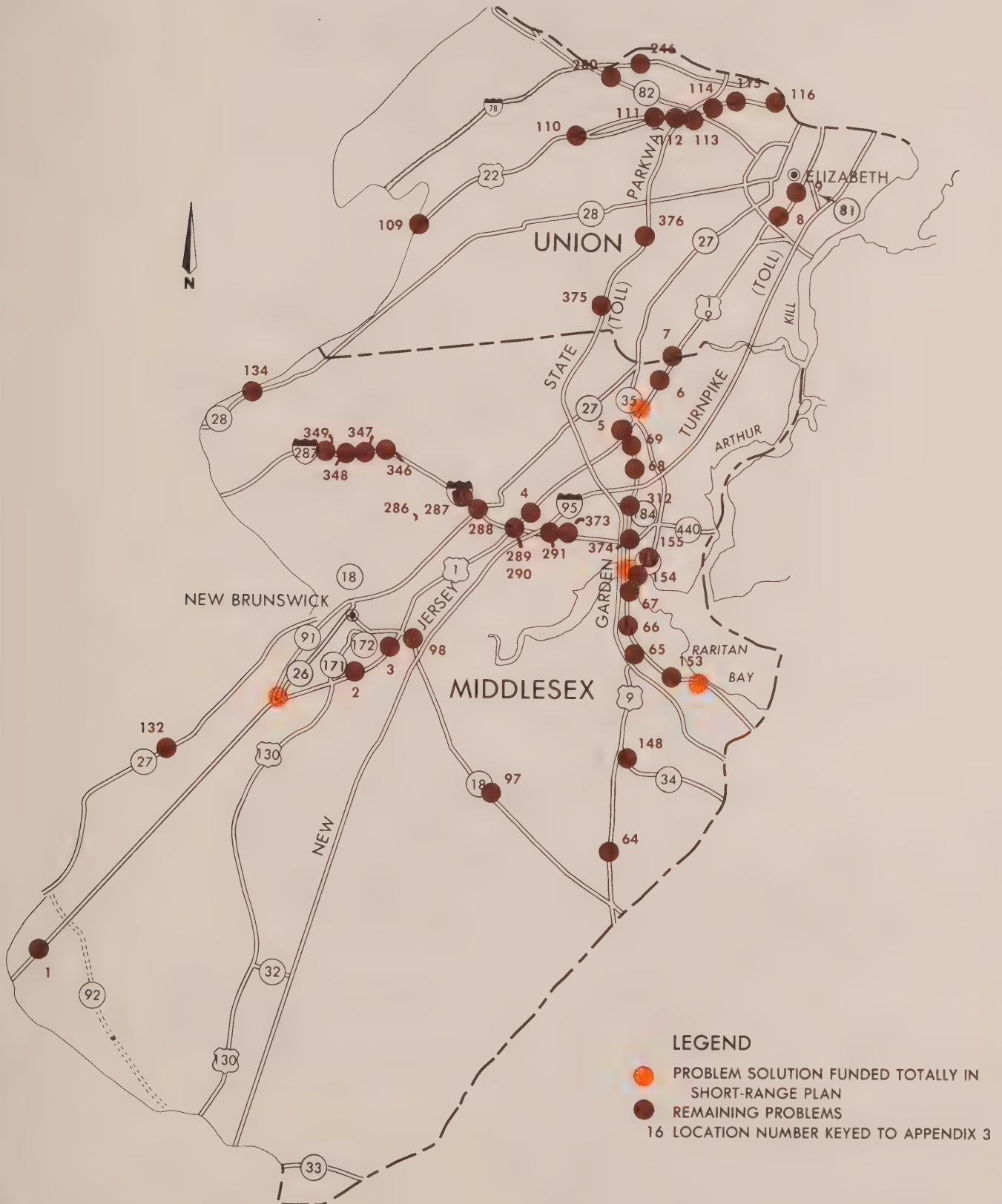
**FIGURE 20-1**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 3**  
**BRIDGE PROBLEMS**  
 BERGEN, ESSEX & HUDSON COUNTIES



**FIGURE 20-2**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 3**  
**BRIDGE PROBLEMS**  
 MORRIS, PASSAIC, SUSSEX, AND WARREN COUNTIES

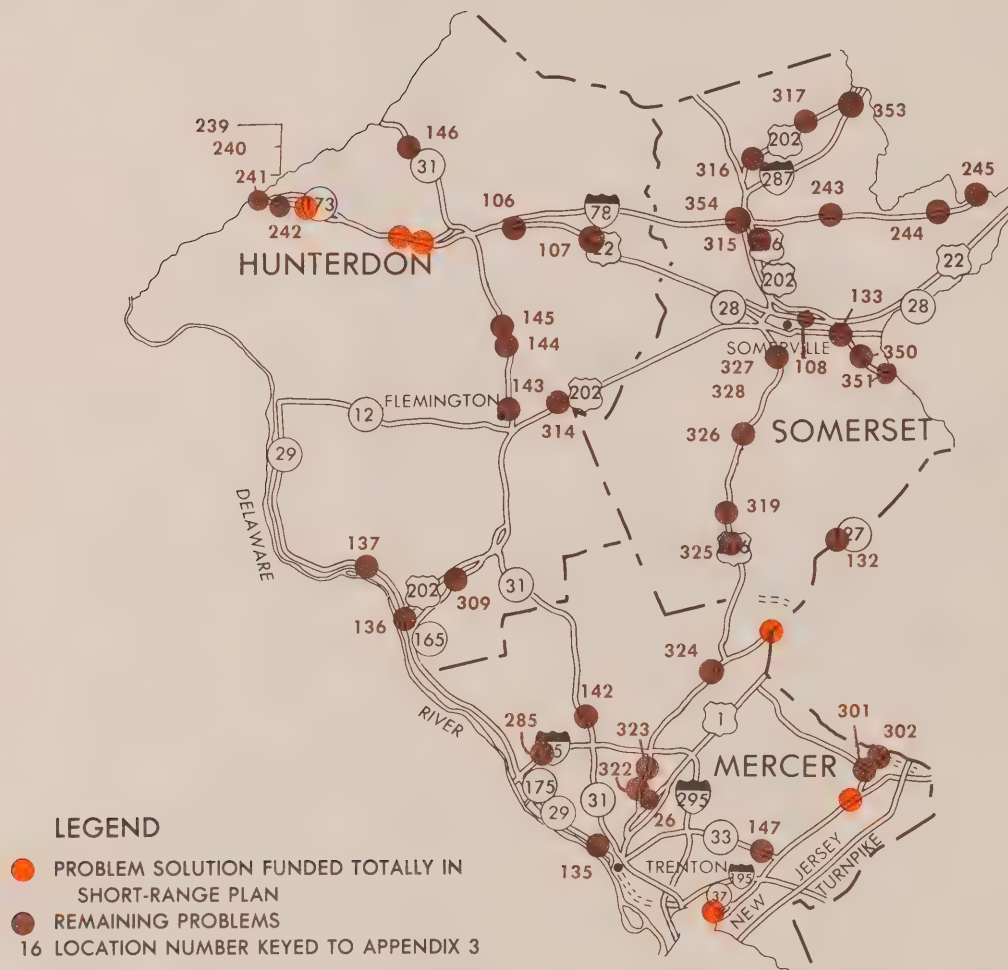


**FIGURE 20-3**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 3**  
**BRIDGE PROBLEMS**  
 MIDDLESEX AND UNION COUNTIES

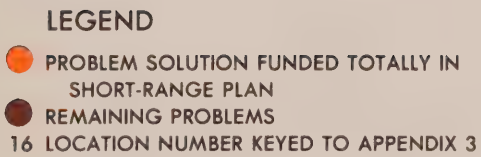




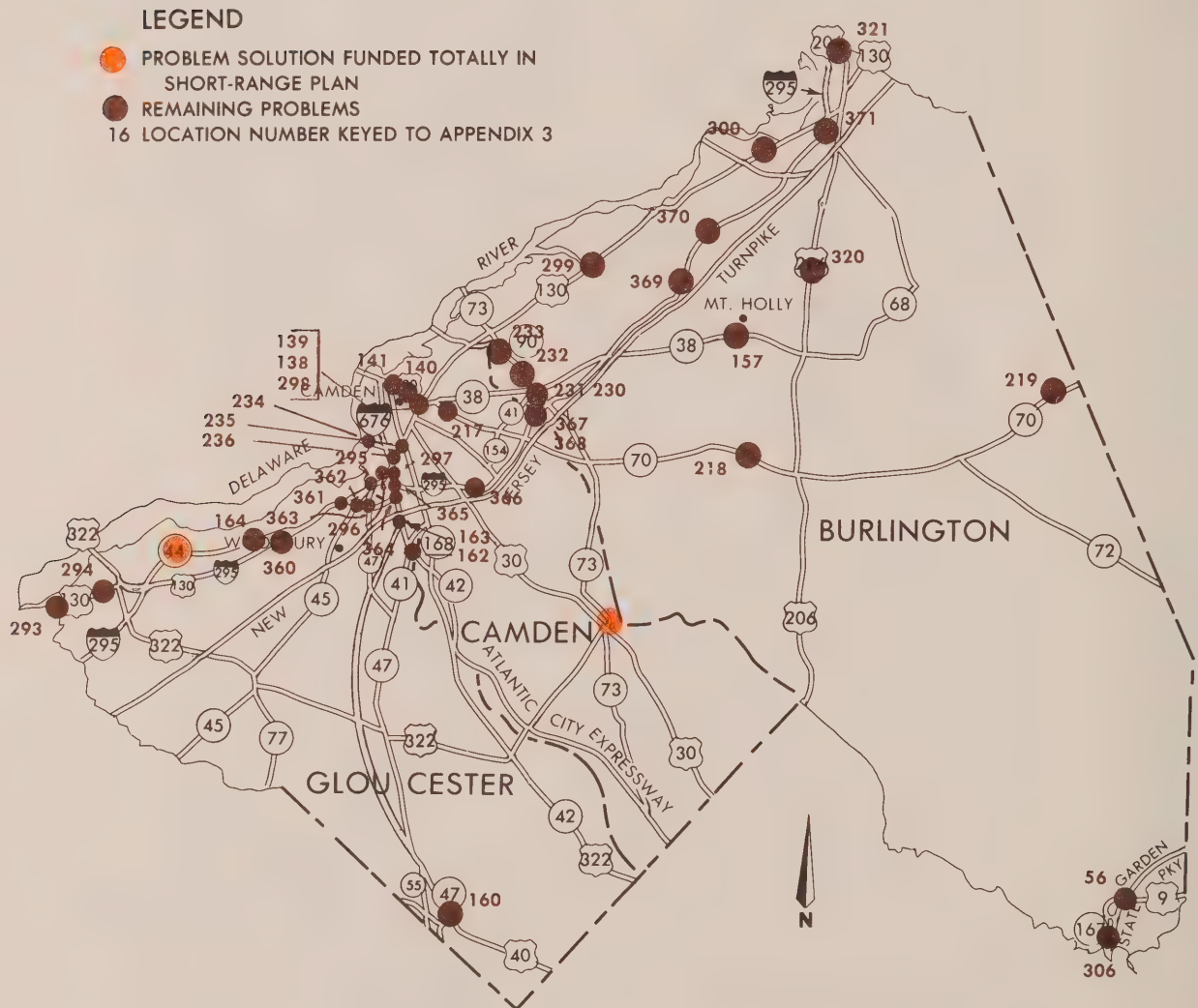
**FIGURE 20-4**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 3**  
**BRIDGE PROBLEMS**  
 HUNTERDON, MERCER AND SOMERSET COUNTIES



## MONMOUTH AND OCEAN COUNTIES



**FIGURE 20-6**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 3**  
**BRIDGE PROBLEMS**  
 BURLINGTON, CAMDEN AND GLOUCESTER COUNTIES





**FIGURE 20-7**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 3**  
**BRIDGE PROBLEMS**  
 ATLANTIC, CAPE MAY, CUMBERLAND AND SALEM COUNTIES



**LEGEND**

- PROBLEM SOLUTION FUNDED TOTALLY IN SHORT-RANGE PLAN
- REMAINING PROBLEMS
- 16 LOCATION NUMBER KEYED TO APPENDIX 3



# APPENDIX

(Longer Range and Continuing Needs)

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**APPENDIX 1**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 1 AREA OR CORRIDORWIDE CONGESTION PROBLEMS**

Loc. No.	Route	Description	Milepost	
			From	To
		<b>Priority 1</b>		
1*	1	U.S. 1A, LAWRENCE TWP., MERCER CO. TO US 130, NO. BRUNSWICK TWP., MIDDLESEX CO.	5.50	24.70
2*	1	I-95, EDISON TWP., MIDDLESEX CO. TO I-278, LINDEN, UNION CO.	32.00	42.30
3	1&9	US 1&9T, NEWARK, ESSEX CO. TO US 1B, JERSEY CITY, HUDSON CO.	51.30	54.50
4	1&9	NJ 93, RIDGEFIELD, BERGEN CO. TO US 9W, FORT LEE, BERGEN CO.	61.90	64.58
5	1B	US 1&9 (TONNELLE AVE.), JERSEY CITY, HUDSON CO. TO JERSEY ST., JERSEY CITY, HUDSON CO.	0.0	1.47
6	1&9T	CENTRAL AVE., KEARNY, HUDSON CO. TO HOWELL ST., JERSEY CITY, HUDSON CO.	1.24	3.83
7	3	US 46, CLIFTON, PASSAIC CO. TO US 1&9, NO. BERGEN TWP., HUDSON CO.	0.0	10.81
8*	4	NJ 20, PATERSON, PASSAIC CO. TO NJ I-95, FORT LEE, BERGEN CO.	0.0	10.89
9	7	US 1&9T, JERSEY CITY, HUDSON CO. TO NJ 21, BELLEVILLE, ESSEX CO.	0.0	5.29
10	7	NEWARK/BELLEVILLE LINE, ESSEX CO. TO ORANGE ST., NUTLEY, PASSAIC CO.	5.99	9.93
11	9	CR539, TUCKERTON, OCEAN CO. TO CR606, STAFFORD FORGE RD., EAGLESWOOD TWP., OCEAN CO.	62.64	66.07
12	9	CR532, OCEAN TWP., OCEAN CO. TO BAY AVE., LACY TWP., OCEAN CO.	78.05	81.30
13	9	MILL CK. RD., BERKELEY TWP., OCEAN CO. TO NJ 166, BEACHWOOD, OCEAN CO.	87.25	89.60
14	9	GARDEN STATE PARKWAY, DOVER TWP., OCEAN CO. TO NJ 88, LAKEWOOD TWP., OCEAN CO.	94.39	101.55
15	9W	I-95, FORT LEE, BERGEN CO. TO DEMAREST AVE., ENGLEWOOD CLIFFS, BERGEN CO.	0.0	2.50
16*	10	US 46, ROXBURY TWP., MORRIS CO. TO FRANKLIN RD., DENVILLE TWP., MORRIS CO., AND	0.0	7.86

\* PROBLEM SOLUTION PARTIALLY FUNDED IN SHORT-RANGE PLAN.

Location number is keyed to Figure 18.

**APPENDIX 1**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 1 AREA OR CORRIDORWIDE CONGESTION PROBLEMS**

Loc. No.	Route	Description	Milepost	
			From	To
Priority 1 (Cont'd)				
16* (CONT'D)	10	NJ 53, TABOR RD., PARSIPPANY-TROY HILLS TWP. & MORRIS PLAINS, MORRIS CO. TO JOHNSON RD., PARSIPPANY-TROY HILLS TWP. & MORRIS PLAINS, MORRIS CO.	10.70	11.63
17	15	US 46, DOVER, MORRIS CO. TO UNION TPK., ROCKAWAY TWP., MORRIS CO.	0.0	2.73
18	15	NJ 181, SPARTA TWP., SUSSEX CO. TO US 206, FRANKFORT TWP., SUSSEX CO.	14.20	19.62
19	17	NJ 7, NO. ARLINGTON, BERGEN CO. TO NJ 3, RUTHERFORD, BERGEN CO.	0.0	3.77
20	17	I-80, HACKENSACK, BERGEN CO. TO LINWOOD AVE., RIDGEWOOD, BERGEN CO.	8.50	15.60
21	18	MATAWAN RD./OLD BRIDGE TWP., MIDDLESEX CO. TO COLLEGE AVE., NEW BRUNSWICK, MIDDLESEX CO.	34.34	43.31
22	20	US 46, PATERSON, PASSAIC CO. TO NJ 4, PATERSON, PASSAIC CO.	9.13	10.93
23	21	US 22, NEWARK, ESSEX CO. TO OGDEN ST., NEWARK, ESSEX CO.	0.0	4.10
24	22	GROVE ST., BRIDGEWATER TWP., SOMERSET CO. TO CR639, BRIDGEWATER TWP., SOMERSET CO.	34.94	36.56
25	23	CR641, CEDAR GROVE TWP., ESSEX CO. TO CR639, CEDAR GROVE TWP., ESSEX CO.	0.97	2.06
26	23	CR527, CEDAR GROVE TWP., ESSEX CO. TO US 46, WAYNE TWP., PASSAIC CO.	3.60	5.06
27	23	SO. OF WALLKILL CK., HARDYSTON TWP., SUSSEX TO 4TH ST., SUSSEX, SUSSEX CO.	36.16	39.59
28	28	CR633, BRIDGEWATER TWP., SOMERSET CO. TO I-287, BRIDGEWATER TWP., SOMERSET CO.	5.56	6.62
29	30	CR656, HADDON HEIGHTS, CAMDEN CO. TO US 130, COLLINGSWOOD, CAMDEN CO.	51.45	54.43
30	30	NJ 38, PENNSAUKEN TWP., CAMDEN CO. TO BEN FRANKLIN TOLL PLAZA, CAMDEN, CAMDEN CO.	55.50	57.90

\* PROBLEM SOLUTION PARTIALLY FUNDED IN SHORT-RANGE PLAN.

Location number is keyed to Figure 18.



**APPENDIX 1**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 1 AREA OR CORRIDORWIDE CONGESTION PROBLEMS**

Loc. No.	Route	Description	Milepost	
			From	To
Priority 1 (Cont'd)				
31	33	I-295, HAMILTON TWP., MERCER CO. TO CR526, WASHINGTON TWP., MERCER CO.	3.35	7.50
32*	33	CR571, HIGHTSTOWN, MERCER CO. TO LAKE DR., E. WINDSOR TWP. MERCER CO.	14.18	15.75
33*	33	BRADLEY DR., FREEHOLD TWP., MONMOUTH CO. TO FAIRFIELD RD., HOWELL TWP., MONMOUTH CO.	26.50	31.50
34	34	NJ 33, HOWELL TWP., MONMOUTH CO. TO NJ 18, COLTS NECK TWP., MONMOUTH CO.	8.81	12.28
35	35	MANTOLOKING/BRICK TWP. LINE, OCEAN CO. TO WASHINGTON AVE., PT. PLEASANT, OCEAN CO.	9.10	13.12
36*	37	NJ 70, LAKEHURST, OCEAN CO. TO CONIFER ST., DOVER TWP., OCEAN CO.	31.52	39.00
37	42	CR544, WOODBURY, GLOUCESTER CO. TO I-295, BELLMAWR, CAMDEN CO.	11.90	14.12
38	45	CR551, WOODBURY, GLOUCESTER CO. TO CR644 WOODBURY, GLOUCESTER CO.	25.42	26.21
39	46	CR513, ROCKAWAY TWP., MORRIS CO. TO I-80, DENVILLE TWP., MORRIS CO.	39.91	42.38
40	46	NJ 23, WAYNE TWP., PASSAIC CO. TO NJ 3, CLIFTON, PASSAIC CO.	56.32	60.09
41	47	GARDEN STATE PARKWAY, MIDDLE TWP., CAPE MAY CO. TO BEAVER DAM RD., DENNIS TWP., CAPE MAY CO.	3.08	16.84
42	47	NJ 55F, MILLVILLE, CUMBERLAND CO. TO LANDIS AVE., VINELAND, CUMBERLAND CO.	42.40	46.59
43	50	PETERSBURG RD., UPPER TWP., CAPE MAY CO. TO NJ 49, UPPER TWP., CAPE MAY CO.	3.61	6.82
44	70	NJ 73, EVESHAM TWP., BURLINGTON CO. TO CR541, MEDFORD TWP., BURLINGTON CO.	8.30	13.87
45	70	UNION AVE., LAKEHURST, OCEAN CO. TO CR547, LAKEHURST, OCEAN CO.	43.55	44.27
46	70	NJ 88, BRICK TWP., OCEAN CO. TO NJ 35, WALL TWP., MONMOUTH CO.	54.93	59.64

\* PROBLEM SOLUTION PARTIALLY FUNDED IN SHORT-RANGE PLAN.

Location number is keyed to Figure 18.

**APPENDIX 1  
LONGER RANGE AND CONTINUING NEEDS  
CATEGORY 1 AREA OR CORRIDORWIDE CONGESTION PROBLEMS**

Loc. No.	Route	Description	Milepost	
			From	To
Priority 1 (Cont'd)				
47	80	I-287, PARSIPPANY-TROY HILLS TWP., MORRIS CO. TO PASSAIC RIVER, MONTVILLE TWP., MORRIS CO.	43.60	48.38
48	80	PASSAIC RIVER, WAYNE TWP., PASSAIC CO. TO NJ 23, WAYNE TWP., PASSAIC CO.	52.82	53.59
49	80	NJ 20F, PATERSON, PASSAIC CO. TO I-95, TEANECK TWP., BERGEN CO.	58.32	68.30
50	88	GARDEN STATE PARKWAY, LAKEWOOD TWP., OCEAN CO. TO NJ 35, PT. PLEASANT, OCEAN CO.	3.40	9.84
51	93	US 1&9, RIDGEFIELD, BERGEN CO. TO NJ 4, ENGLEWOOD, BERGEN CO.	0.0	3.41
52	95	I-80, TEANECK TWP., BERGEN CO. TO GEORGE WASHINGTON BRIDGE TOLL PLAZA, FORT LEE, BERGEN CO.	70.10	73.00
53*	130	ASSISCUNK CK., BURLINGTON, BURLINGTON CO. TO US 206, BORDENTOWN TWP., BURLINGTON CO.	46.60	55.60
54	166	NJ 37, DOVER TWP., OCEAN CO. TO US 9/GARDEN STATE PARKWAY, DOVER TWP., OCEAN CO.	1.98	3.75
55	168	NJ 42, GLOUCESTER TWP., CAMDEN CO. TO I-295, BELLMAWR, CAMDEN CO.	3.49	7.45
56	182	NJ 57, HACKETTSTOWN, WARREN CO. TO US 46, HACKETTSTOWN, WARREN CO.	0.0	0.98
57	202	I-287, BRIDGEWATER TWP., SOMERSET CO. TO TOLOMINI RD., BRIDGEWATER TWP., SOMERSET CO.	27.02	27.85
58	202	CR525, BERNARDSVILLE, SOMERSET CO. TO CR527, BERNARDSVILLE, SOMERSET CO.	38.08	38.67
59*	206	CR518, MONTGOMERY TWP., SOMERSET CO. TO SOMERVILLE CIRCLE, RARITAN, SOMERSET CO.	58.22	71.49
60	206	CR613, MT. OLIVE TWP., MORRIS CO. TO I-80, ROXBURY TWP., MORRIS CO.	92.62	96.10

\* PROBLEM SOLUTION PARTIALLY FUNDED IN SHORT-RANGE PLAN.

Location number is keyed to Figure 18.

**APPENDIX 1  
LONGER RANGE AND CONTINUING NEEDS  
CATEGORY 1 AREA OR CORRIDORWIDE CONGESTION PROBLEMS**

Loc. No.	Route	Description	Milepost	
			From	To
Priority 1 (Cont'd)				
61	206	NJ 183, STANHOPE, SUSSEX CO. TO CR607, BYRAM TWP., SUSSEX CO.	98.50	99.68
62	206	SPRING ST., NEWTON, SUSSEX CO. TO NJ 94, HAMPTON TWP., SUSSEX CO.	109.72	112.15
63	208	NJ 4, FAIRLAWN, BERGEN CO. TO CR507, FAIRLAWN, BERGEN CO.	0.0	2.90
64	280	I-80, PARSIPPANY-TROY HILLS TWP., MORRIS CO. TO CR577, W. ORANGE TWP., ESSEX CO.	0.0	8.19
65	280	MT. PLEASANT AVE., W. ORANGE TWP., ESSEX CO. TO SUMMER ST., NEWARK, ESSEX CO.	9.60	14.00
66	280	HARRISON AVE., HARRISON, HUDSON CO. TO JERSEY CITY & NEWARK TPK., KEARNY, HUDSON CO.	14.80	16.57
67	287	I-95, SO. PLAINFIELD, MIDDLESEX CO. TO CR527, FRANKLIN TWP., SOMERSET CO.	0.0	6.00
68	287	WOODLAWN AVE., SOMERVILLE, SOMERSET CO. TO I-78, BEDMINSTER TWP., SOMERSET CO.	13.16	16.80
69	439	I-278, ELIZABETH, UNION CO. TO NJ 27, ELIZABETH, UNION CO.	0.23	4.18
70	444	CR501, WOODBRIDGE TWP., MIDDLESEX CO. TO US 1, WOODBRIDGE TWP., MIDDLESEX CO.	129.20	130.65
71	444	CR604, CLARK TWP., UNION CO. TO US 22, UNION TWP., UNION CO.	135.50	141.00
72	495	NJ TPK., NO. BERGEN TWP., HUDSON CO. TO GREGORY AVE., WEEHAWKEN TWP., HUDSON CO.	0.0	1.98

**Priority 2**

1	1	I-278, LINDEN, UNION CO. TO NJ TPK., NEWARK, ESSEX CO.	42.30	48.80
2	1&9	I-495, NO. BERGEN TWP., HUDSON CO. TO NJ 93, RIDGEFIELD, BERGEN CO.	57.40	61.90
3	9	CR625 (JFK BLVD.) & OLD SCHOOL RD., DENNIS, CAPE MAY CO. TO NJ 50 UPPER TWP., CAPE MAY CO.	20.89	23.58

*Location number is keyed to Figure 18.*



**APPENDIX 1**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 1 AREA OR CORRIDORWIDE CONGESTION PROBLEMS**

Loc. No.	Route	Description	Milepost	
			From	To
Priority 2 (Cont'd)				
4	9	GARDEN STATE PKWY., (INTERCHANGE 29) SOMERS PT., ATLANTIC CO. TO US 40&322 (BLACK HORSE PIKE), PLEASANTVILLE, ATLANTIC CO.	32.00	39.90
5	9	US 35&9, SOUTH AMBOY,TO US 1, WOODBIDGE TWP., MIDDLESEX CO.	129.70	136.23
6	17	MEADOW RD., RUTHERFORD, BERGEN CO. TO I-80, HACKENSACK, BERGEN CO.	3.80	8.50
7	22	I-78, CLINTON TWP., HUNTERDON CO. TO CR 622 (MAIN ST.), CLINTON TWP. & LEBANON, HUNTERDON CO.	19.51	21.32
8	22	CR527 (MOUNTAIN AVE.) BOUND BROOK & BRIDGEWATER TWP., SOMERSET CO. TO US 1&9, NEWARK, ESSEX CO.	39.20	60.59
9	27	I-95, EDISON TWP., MIDDLESEX CO. TO NJ 35 & COLONIA BLVD., RAHWAY, UNION CO.	20.80	27.25
10	28	CR611 (TERRILL RD.), PLAINFIELD & FANWOOD, UNION CO. TO NJ 444, (GARDEN STATE PARKWAY), CRANFORD TWP., UNION CO.	17.15	23.15
11	30	NJ 73, WATERFORD TWP., CAMDEN CO. TO CR573, (HIGHLAND AVE./CLEMENTS BR. RD.) BARRINGTON & HADDON HTS., CAMDEN CO.	40.42	50.78
12	31	US 22 & I-78, CLINTON TWP., HUNTERDON CO. TO NJ 57, WASHINGTON, WARREN CO.	32.20	42.90
13	40	NJ 48, CARNEYS POINT TWP., SALEM CO. TO NJ 45, WOODSTOWN, SALEM CO.	5.50	10.70
14	46	NJ 17, HASBROUCK HTS., BERGEN CO. TO US 1&9, PALISADES PARK, BERGEN CO.	68.22	72.15
15	47	BRANCH OF MANTUA CREEK, DEPTFORD TWP., GLOUCESTER CO. TO CR663, (TAN YARD RD.), DEPTFORD TWP., GLOUCESTER CO.	69.00	70.20
16	49	NJ TPK., PENNSVILLE TWP., SALEM CO. TO FERRY RD., PENNSVILLE TWP., SALEM CO.	0.0	2.40
17	63	KENNEDY BLVD., NORTH BERGEN TWP., HUDSON CO. TO US 1&9/46, FT. LEE, BERGEN CO.	0.0	3.11

Location number is keyed to Figure 18.

**APPENDIX 1**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 1 AREA OR CORRIDORWIDE CONGESTION PROBLEMS**

Loc. No.	Route	Description	Milepost	
			From	To
Priority 2 (Cont'd)				
18	73	I-295, MT. LAUREL TWP., BURLINGTON CO. TO FORK LANDING RD., CINNAMINSON TWP., BURLINGTON CO.	27.80	31.80
19	80	MILL RD., JEFFERSON, MORRIS CO. TO NJ 15, WHARTON, MORRIS CO.	32.30	3.40
20	88	HOLLY ST., LAKEWOOD TWP., OCEAN CO. TO GARDEN STATE PARKWAY, LAKEWOOD TWP., OCEAN CO.	0.94	34.00
21	183	I-80, ROXBURY, MORRIS CO. TO US 206, STANHOPE, SUSSEX CO.	0.0	2.12
22	206	CR517 (LENAPE RD.), ANDOVER, SUSSEX CO. TO NJ 94, NEWTON, SUSSEX CO.	103.96	109.72
23	287	NJ 24, MORRIS TWP., MORRIS CO. TO I-80, PARSIPPANY-TROY HILLS TWP., MORRIS CO.	31.50	37.80

**Priority 3**

1	1	US 130, NORTH BRUNSWICK TWP., MIDDLESEX CO. TO I-95, EDISON TWP., MIDDLESEX CO.	24.70	32.00
2	9	US 40&322 (BLACK HORSE PIKE), PLEASANTVILLE, ATLANTIC CO. TO US 30 (WHITE HORSE PIKE), ABSECON, ATLANTIC CO.	39.90	42.80
3	9	THREE BROOKS RD., FREEHOLD TWP., MONMOUTH CO. TO TEPEHEMUS BROOK, MANALAPAN TWP., MONMOUTH CO.	112.00	117.00
4	27	NJ 18, NEW BRUNSWICK, MIDDLESEX CO. TO I-95, EDISON TWP., MIDDLESEX CO.	16.60	20.80
5	28	NJ 444 (GARDEN STATE PARKWAY), CRANFORD TWP., UNION CO. TO NJ 27 & CHERRY ST., ELIZABETH, UNION CO.	23.15	26.69
6	31	NJ 57, WASHINGTON, WARREN CO. TO US 46, WHITE TWP., WARREN CO.	42.90	49.02
7	35	NJ 70/34 CIRCLE, WALL TWP., MONMOUTH CO. TO NJ 71 BELMAR, MONMOUTH CO.	16.04	21.06

*Location number is keyed to Figure 18.*

**APPENDIX 1**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 1 AREA OR CORRIDORWIDE CONGESTION PROBLEMS**

Loc. No.	Route	Description	Milepost	
			From	To
Priority 3 (Cont'd)				
8	35	3RD. AVE., NEPTUNE, MONMOUTH CO. TO NJ 66, OCEAN TWP., MONMOUTH CO.	22.96	25.00
9	40	CR563 (TILTON RD.), EGG HARBOR TWP., ATLANTIC CO. TO SUNSET AVE., ATLANTIC CITY, ATLANTIC CO.	56.90	64.14
10	46	GARDEN STATE PARWKAY, CLIFTON PASSAIC CO. TO NJ 17, HASBROUCK HTS., BERGEN CO.	63.60	68.22
11	47	CR706/534 (COOPER ST.), DEPTFORD TWP., GLOUCESTER CO. TO US 130 BROOKLAWN, CAMDEN CO.	71.98	75.24
12	73	CR534 (E. JACKSON RD.), BERLIN TWP., CAMDEN CO. TO I-295, MT. LAUREL TWP., BURLINGTON CO.	16.20	27.80
13	82	NJ 124/SPRINGFIELD AVE., SPRINGFIELD TWP., UNION CO. TO NJ 439, UNION TWP., UNION CO.	0.0	4.93
14	130	NJ 156, HAMILTON TWP., MERCER CO. TO DUTCHNECK RD., EAST WINDSOR TWP., MERCER CO.	59.60	68.20
15	166	US 9, BEACHWOOD, OCEAN CO. TO NJ 37, DOVER TWP., OCEAN CO.	0.0	1.98
16	322	PLANK RUN, GLASSBORO, GLOUCESTER CO. TO MOORE AVE., MONROE TWP., GLOUCESTER CO.	15.50	18.90

*Location number is keyed to Figure 18.*



**APPENDIX 2  
LONGER RANGE AND CONTINUING NEEDS  
CATEGORY 2 SPOT CONGESTION PROBLEMS  
PRIORITY 1**

Loc. No.	Route	Mile- post(s)	Description	Municipality	County
1	1	0.90	NJ 33 & BARLOW ST. CIRCLE	TRENTON	MERCER
2*	1	8.10	CR533 (QUAKERBRIDGE RD. PROVINCE LINE RD.)	WEST WINDSOR/ LAWRENCE TWPS.	MERCER
3*	1	10.92	ALEXANDER RD.	WEST WINDSOR TWP.	MERCER
4*	1	11.35	CR571 & WASHINGTON RD.	WEST WINDSOR TWP.	MERCER
5*	1	11.95	HARRISON ST.	WEST WINDSOR TWP.	MERCER
6*	1	22.55	CR608 (ADAMS LA.)	NORTH BRUNSWICK TWP.	MIDDLESEX
7*	1	24.75	US 130 & NJ 171	NORTH BRUNSWICK TWP.	MIDDLESEX
8	1	33.65	PARSONAGE RD.	EDISON TWP.	MIDDLESEX
9	1	34.60	RAMP TO NJ 444	WOODBIDGE TWP.	MIDDLESEX
10	1&9	45.45	CR624 (NORTH AVE.)	ELIZABETH	UNION
11	1&9	54.55	US 1B, TONNELLE AVE. CIRCLE	JERSEY CITY	HUDSON
12	1&9	57.65	UNION TURNPIKE	NORTH BERGEN TWP.	HUDSON
13	1&9T	0.74 1.03	PASSAIC RIVER TO END OF BRIDGE	KEARNY	HUDSON
14	1&9T	2.30	INTCHGE. WITH NJ 440	JERSEY CITY/BAYONNE	HUDSON
15	3	0.10	CR621 (VALLEY RD.)	CLIFTON	PASSAIC
16	3	8.50 8.70	GRACE ST.	SECAUCUS	HUDSON
17	3	10.00	CR681 (PATERSON PLANK RD.)	SECAUCUS	HUDSON
18	4	2.15 2.38	NJ 208 & SADDLE RIVER RD.	FAIRLAWN	BERGEN
19	4	3.00 3.10	RAMP MARGINAL RD. SOUTH OF SPROUT BROOK	PARAMUS	BERGEN
20	9	7.03	NJ 47 (RIO GRANDE AVE.)	MIDDLE TWP.	CAPE MAY
21	9	33.12	NJ 52	SOMERS POINT	ATLANTIC
22	9	34.25	BETHEL RD.	SOMERS POINT	ATLANTIC
23	9	38.20	CR563 (TILTON RD.)	NORTHFIELD	ATLANTIC
24	9	94.70	INDIAN HEAD RD.	DOVER TWP.	OCEAN
25	9	112.60	NJ 79 (SOUTH ST. & SHANCK RD.)	FREEHOLD TWP.	MONMOUTH
26*	10	0.00	US 46 CONNECTION TO MAIN ST.	ROXBURY TWP.	MORRIS
27*	10	11.45	US 202, (LITTLETON RD.) INTERCHANGE	MORRIS PLAINS/ P.T.-H. TWP.	MORRIS
28	10	17.42	RIVER RD.	EAST HANOVER TWP.	MORRIS
29	17	7.40	WILLIAMS AVE.	HASBROUCK HTS.	BERGEN
30	17	7.82 8.00	CR55 (POLIFLY, TERRACE RD.) TO PLEASANTVILLE AVE.	HASBROUCK HTS.	BERGEN
31	17	16.75	RACETRACK RD.	HOHOKUS	BERGEN
32*	17	21.70	LAKE ST.	RAMSEY	BERGEN
33	18	38.85	EDGEBORO RD., NEW BRUNSWICK TPKE.	EAST BRUNSWICK TWP.	MIDDLESEX
34	22	33.00	COUNTRY CLUB RD.	BRIDGEWATER TWP.	SOMERSET

\* Solution is partially funded in the Short-Range Plan or problem is located within a corridor whose solution is partially funded in the Short-Range Plan.

Location number is keyed to Figure 19.

**APPENDIX 2  
LONGER RANGE AND CONTINUING NEEDS  
CATEGORY 2 SPOT CONGESTION PROBLEMS  
PRIORITY 1 (CONT'D)**

Loc. No.	Route	Mile- post(s)	Description	Municipality	County
35	22	34.00 34.40	US 202/206 INTCHGE.	BRIDGEWATER TWP.	SOMERSET
36	22	47.58	OVERPASS AND PARK AVE.	SCOTCH PLAINS TWP.	UNION
37	22	50.35	CR645 (NEW PROVIDENCE RD.)	MOUNTAINSIDE	UNION
38	23	4.35	MAIN ST.	LITTLE FALLS TWP.	PASSAIC
39	24	43.49	US 202	MORRISTOWN	MORRIS
40	27	18.86	CR 529 (PLAINFIELD AVE.)	EDISON TWP.	MIDDLESEX
41	28	19.55	W. BROAD ST.	WESTFIELD	UNION
42	28	23.00 23.30	NJ 444 RAMPS	CRANFORD TWP.	UNION
43	28	25.97	NJ 439 (ELMORA AVE.)	ELIZABETH	UNION
44	30	.77	NJ 87 & S. CAROLINA AVE.	ATLANTIC CITY	ATLANTIC
45	30	1.40	US 30 AT HURON AVE./ILLINOIS AVE.	ATLANTIC CITY	ATLANTIC
46	30	47.07	LAUREL RD.	STRATFORD	CAMDEN
47	31	34.15	CR513 (CLINTON RD.)	CLINTON TWP.	HUNTERDON
48	33	0.17 0.22	GREENWOOD AVE. CIRCLE	TRENTON	MERCER
49	35	32.00	CR13A (SYCAMORE AVE.)	SHREWSBURY	MONMOUTH
50	37	37.20 37.50	SANDYNOOK RD. TO N. BRANCH OF TOMS RIVER	DOVER TWP.	OCEAN
51	37	38.15	NJ 166	DOVER TWP.	OCEAN
52	37	38.85	HOOPER AVE.	DOVER TWP.	OCEAN
53	38	3.89	COLES AVE., CR616, CR627 CIRCLE	CHERRY HILL TWP.	CAMDEN
54	38	7.00	PLEASANT VALLEY RD.	MOORESTOWN TWP.	BURLINGTON
55	38	7.50	CR607 (S. CHURCH ST.)	MOORESTOWN TWP.	BURLINGTON
56	38	7.60	CR673 (FELLOWSHIP RD.)	MOORESTOWN TWP.	BURLINGTON
57	40	57.85	FIRE RD.	EGG HARBOR TWP.	ATLANTIC
58	40	59.20	US 9	PLEASANTVILLE	ATLANTIC
59	41	10.70	NJ 70, NJ 154, CR573 (ELLISBURG CIRCLE)	CHERRY HILL TWP.	CAMDEN
60	41	12.54	CHURCH RD.	CHERRY HILL TWP.	CAMDEN
61	42	5.80	CR651 (GREEN TREE RD.)	WASHINGTON TWP.	GLOUCESTER
62	45	25.80	CR534 (COOPER ST./DELAWARE ST.)	WOODBURY	GLOUCESTER
63	46	42.75	BROADWAY AVE.	DENVILLE TWP.	MORRIS
64	46	47.70	BALDWIN RD.	PARSIPPANY TROY- HILLS TWP.	MORRIS
65	46	48.39	N. BEVERWYCK RD.	PARSIPPANY TROY- HILLS TWP.	MORRIS
66*	46	57.00	CR640 (RIVERVIEW DR.)	TOTOWA	PASSAIC
67	46	69.96	CR124 (BERGEN TPKE.) CIRCLE	LITTLE FERRY	BERGEN
68	47	40.10	NJ 49	MILLVILLE	CUMBERLAND
69	47	71.90	CR534/706 (COOPER ST.)	DEPTFORD TWP.	GLOUCESTER

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Location number is keyed to Figure 19.

**APPENDIX 2  
LONGER RANGE AND CONTINUING NEEDS  
CATEGORY 2 SPOT CONGESTION PROBLEMS**

**PRIORITY 1 (CONT'D)**

<b>Loc. No.</b>	<b>Route</b>	<b>Mile- post(s)</b>	<b>Description</b>	<b>Municipality</b>	<b>County</b>
70	47	75.24	US 130 CIRCLE	BROOKLAWN	CAMDEN
71	49	0.15	HUMPHREY'S AVE./OLD PENNSVILLE & AUBURN RD.	PENNSVILLE TWP.	SALEM
72	52	2.15	CR585 AND CR559 CIRCLE	SOMERS POINT	ATLANTIC
73	73	16.20	CR534 (JACKSON RD.)	BERLIN TWP.	CAMDEN
74	73	27.50	FELLOWSHIP RD.	MT. LAUREL TWP.	BURLINGTON
75	78	33.92	CR525 (LIBERTY CRNR. RD. & MARTINSVILLE RD.)	WARREN TWP.	SOMERSET
76	79	1.40	COURT ST., CR537 (E. MAIN ST.)	FREEHOLD	MONMOUTH
77	79	1.60	CR537, SPRING ST. & CENTER ST.	FREEHOLD	MONMOUTH
78	80	34.01	E.B. EXIT RAMP TO NJ 15 S.B.	WHARTON	MORRIS
79	80	57.00	CR636 (SQUIRRELWOOD RD.)	PATERSON/ W. PATERSON	PASSAIC
80	80	65.00	NB NJ 17 TO EB I-80	HACKENSACK/ HASBROUCK HTS.	BERGEN
81	80	65.35	POLIFLY RD.	HACKENSACK	BERGEN
82	87	0.00 0.45	US 30 TO HURON & MARYLAND AVE. CIRCLE	ATLANTIC CITY	ATLANTIC
83	93	2.23	CR12 (FORT LEE RD.)	LEONIA	BERGEN
84	130	25.50	CR551 CIRCLE	BROOKLAWN	CAMDEN
85	130	36.00	CR607 (CHURCH RD./CINNAMINSON AVE.), CR606 (BRANCH PIKE)	CINNAMINSON TWP.	BURLINGTON
86	166	1.15	WATER ST.	DOVER TWP.	OCEAN
87	168	5.45	CR544 (EVESHAM RD.)	RUNNEMEDE/ GLOUCESTER TWP.	CAMDEN
88	168	5.80	CLEMENTS BRIDGE RD.	RUNNEMEDE	CAMDEN
89	168	8.09	KINGS HIGHWAY	MOUNT EPHRAIM	CAMDEN
90	202	24.60	CR567 (FIRST AVE.)	RARITAN	SOMERSET
91*	202	25.10	SOMERVILLE CIRCLE, US 202, 206 & NJ 28	SOMERVILLE	SOMERSET
92*	206	58.22	CR518 (FRANKLIN TPKE.)	MONTGOMERY TWP.	SOMERSET
93*	206	71.00	CR626 (SOMERSET ST.)	RARITAN	SOMERSET
94	280	13.20	1ST STREET	NEWARK	ESSEX
95	287	37.50	RAMP AT SMITH RD.	PARSIPPANY TROY- HILLS TWP.	MORRIS
96	295	26.70	NJ 42 (INTCHGE. 26)	BELLMAWR	CAMDEN
97	322	23.70	US 322, CR536 SPUR, CR610, CR654	MONROE TWP.	GLOUCESTER
98	444	9.80	STONE HARBOR BLVD.	MIDDLE TWP.	CAPE MAY
99	444	11.00	CREST HAVEN RD.	MIDDLE TWP.	CAPE MAY

**PRIORITY 2**

1	001	29.10	PLAINFIELD AVE.	EDISON TWP.	MIDDLESEX
2*	1&9	36.45	NJ 35	WOODBIDGE TWP.	MIDDLESEX
3*	1&9	38.60	E. HAZELWOOD AVE.	RAHWAY	UNION

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**APPENDIX 2  
LONGER RANGE AND CONTINUING NEEDS  
CATEGORY 2 SPOT CONGESTION PROBLEMS  
PRIORITY 2 (CONT'D)**

Loc. No.	Route	Mile- post(s)	Description	Municipality	County
4*	1&9	38.85	LAWRENCE ST.	RAHWAY	UNION
5*	1&9	39.50	E. GRAND AVE.	RAHWAY	UNION
6	1&9	40.75	CR615 (STILES ST.)	LINDEN	UNION
7	1&9	41.09	CR617A (WOOD AVE.)	LINDEN	UNION
8	1&9	44.30	CR612 (E. JERSEY ST.)	ELIZABETH	UNION
9	1&9	44.55	CR610 (E. GRAND ST.)	ELIZABETH	UNION
10	1&9	44.60	BROADWAY AVE.	ELIZABETH	UNION
11	1&9	44.65	MAGNOLIA AVE.	ELIZABETH	UNION
12	1&9	57.23 57.40	NJ 3 TO NJ 495	NORTH BERGEN TWP.	HUDSON
13	1&9	61.85	REMSEN PL., HENDRICKS CAUSEWAY, EDGEWATER AVE. CIRCLE	RIDGEFIELD	BERGEN
14	3	2.70	CR622 (BLOOMFIELD AVE.)	CLIFTON	PASSAIC
15	3	8.10 8.27	NEAR NJ TPKE., 16W & NJ 20	E. RUTHERFORD	BERGEN
16	4	3.35	SPROUT BROOK	PARAMUS	BERGEN
17	4	5.70	CR503 (HACKENSACK AVE.)	HACKENSACK	BERGEN
18*	4	8.55	OVERPECK CREEK	ENGLEWOOD	BERGEN
19	7	4.17	CR507/11 (SCHUYLER AVE.)	KEARNY/ NORTH ARLINGTON	HUD.BER
20	7	4.65	NJ 17	NORTH ARLINGTON	BERGEN
21	9	2.68	NJ 109	LOWER TWP.	CAPE MAY
22	9	131.27	NJ 35 & MAIN ST. CIRCLE	SAYREVILLE	MIDDLESEX
23	9W	2.20	PALISADE AVE.	ENGLEWOOD CLIFFS	BERGEN
24	10	18.75	CR609, CR508, EISENHOWER PARKWAY CIRCLE	LIVINGSTON TWP.	ESSEX
25	12	11.45	CR611, REAVILLE RD., MAIN ST. CIRCLE	FLEMINGTON	HUNTERDON
26	17	14.85	RIDGEWOOD AVE. & GLEN AVE.	PARAMUS	BERGEN
27	17	15.90	PARAMUS RD. & SADDLE RIVER RD.	PARAMUS	BERGEN
28	18	35.52	RUES LA.	EAST BRUNSWICK TWP.	MIDDLESEX
29	18	36.62	ARTHUR ST.	EAST BRUNSWICK TWP.	MIDDLESEX
30	18	37.82	W. FERRIS ST.	EAST BRUNSWICK TWP.	MIDDLESEX
31	18	38.20	W. PROSPECT ST.	EAST BRUNSWICK TWP.	MIDDLESEX
32	18	38.32	TICES LA.	EAST BRUNSWICK TWP.	MIDDLESEX
33	18	41.70	COMMERCIAL AVE.	NEW BRUNSWICK	MIDDLESEX
34	20	9.75	I-80 CONNECTOR	PATERSON	PASSAIC
35	20	11.70	35TH, 34TH, 33RD, 10TH AVE. & BRIDGE ACROSS RIVER	PATERSON	PASSAIC
36	20F	2.53	EXIT JERSEY ST. AT GRAND ST.	PATERSON	PASSAIC
37	21	1.12	VIADUCT TO EMMET ST.	NEWARK	ESSEX
38	21	2.45	RAYMOND BLVD.	NEWARK	ESSEX

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Location number is keyed to Figure 19.

**APPENDIX 2**  
**LONGER RANGE AND CONTINUING NEEDS**  
**CATEGORY 2 SPOT CONGESTION PROBLEMS**  
**PRIORITY 2 (CONT'D)**

Loc. No.	Route	Mile- post(s)	Description	Municipality	County
39	21	3.12	BRIDGE ST.	NEWARK	ESSEX
40	21	3.50	CLAY ST.	NEWARK	ESSEX
41	22	31.20	MILLTOWN RD.	BRIDGEWATER TWP.	SOMERSET
42	22	40.20	KING GEORGE RD.	GREEN BROOK TWP.	SOMERSET
43	22	40.90	CRAMER AVE.	GREEN BROOK TWP.	SOMERSET
44	22	41.42	WARRENVILLE RD.	GREEN BROOK TWP.	SOMERSET
45	22	42.30	CR529 (WASHINGTON AVE.)	GREEN BROOK TWP.	SOMERSET
46	22	46.80	TERRILL RD.	WATCHUNG	SOMERSET
47	22	48.90	GLENSIDE AVE.	SCOTCH PLNS. TWP.	UNION
48	22	56.17	GDN. ST. PKWY., NJ 82 (MORRIS AVE.)	UNION TWP.	UNION
49	23	34.40	CR517 (MOUNTAIN RD.)	HAMBURG	SUSSEX
50	24	43.86 44.25	MADISON ST./ELM ST. TO MADISON AVE.	MORRISTOWN	MORRIS
51	24	48.28	CENTRAL AVE.	MADISON	MORRIS
52	24	50.41	FAIRMONT AVE.	CHATHAM	MORRIS
53	26	1.01	HOW LA.	NEW BRUNSWICK	MIDDLESEX
54	27	28.82	CR613 (GRAND AVE. & WESTFIELD AVE.)	RAHWAY	UNION
55	27	30.63	WOOD AVE.	LINDEN/ROSELLE	UNION
56	28	19.70	SOUTH AVE., SPRING ST.	WESTFIELD	UNION
57	28	20.04	CENTRAL AVE.	WESTFIELD	UNION
58	28	23.73	FAITOUTE AVE. AND GORDON ST.	ROSELLE PK.	UNION
59	28	24.23	CR618B, CR619B (LOCUST ST.)	ROSELLE PK.	UNION
60*	30	7.50	CR651 (MILL RD.)	ABSECON	ATLANTIC
61	30	41.68	WASHINGTON AVE.	BERLIN	CAMDEN
62	30	45.20	CLEMENTON-GIBBSBORO RD.	CLEMENTON/LINDENWOLD	CAMDEN
63	30	48.02	SOMERDALE RD.	SOMERDALE	CAMDEN
64	30	49.01	EVESHAM RD.	MAGNOLIA	CAMDEN
65	30	49.50	WARWICK RD.	MAGNOLIA	CAMDEN
66	30	50.80	CR573 (CLEMENTS BRIDGE RD.) CIRCLE	HADDON HTS.	CAMDEN
67	30	51.74	KINGS HIGHWAY	HADDON HTS./ AUDUBON	CAMDEN
68	30	53.85	COLLINGS AVE.	COLLINGSWOOD	CAMDEN
69	33	27.33	CR537 (W. MAIN ST.)	FREEHOLD	MONMOUTH
70	34	0.00	NJ 35, NJ 70 CIRCLE	WALL TWP.	MONMOUTH
71	35	9.98	CR528 (HERBERT ST.)	MANTOLOKING	OCEAN
72	35	17.50	SEA GIRT AVE.	WALL TWP.	MONMOUTH
73	35	52.32	SMITH ST.	PERTH AMBOY	MIDDLESEX
74	35	55.21	MAIN ST.	WOODBRIIDGE TWP.	MIDDLESEX
75	37	36.65	OAK RIDGE PKWY.	DOVER TWP.	OCEAN
76*	40	10.00	NJ 45 & CR616 (BAILY ST.)	PIESGROVE TWP.	SALEM

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Location number is keyed to Figure 19.

**APPENDIX 2  
LONGER RANGE AND CONTINUING NEEDS  
CATEGORY 2 SPOT CONGESTION PROBLEMS  
PRIORITY 2 (CONT'D)**

<b>Loc. No.</b>	<b>Route</b>	<b>Mile- post(s)</b>	<b>Description</b>	<b>Municipality</b>	<b>County</b>
77	40	56.85	CARDIFF CIRCLE	EGG HARBOR TWP.	ATLANTIC
78	42	4.90	FRIES MILL RD.	WASHINGTON TWP.	GLOUCESTER
79	42	5.30	CR655 (CHAPEL HEIGHTS RD.)	WASHINGTON TWP.	GLOUCESTER
80	45	0.17	GRIFFITH & GRAND ST.	SALEM	SALEM
81	46	50.68	CHAPIN RD. & HOOK MTN. RD.	MONTVILLE TWP.	MORRIS
82	46	65.60	5TH. ST.	SADDLE BROOK TWP.	BERGEN
83	46	68.10	NJ 17	HASBROUCK HTS.	BERGEN
84	46	69.01	HUYLER ST.	TETERBORO	BERGEN
85	46	69.53	CR503 (LIBERTY ST.)	LITTLE FERRY	BERGEN
86	46	71.65 72.15	NJ 93 TO ROFF ST. & US 1&9	PALISADES PK.	BERGEN
87	47	40.80	G ST.	MILLVILLE	CUMBERLAND
88	47	42.60	CUMBERLAND MALL	VINELAND	CUMBERLAND
89	47	46.60	LANDIS AVE. CIRCLE	VINELAND	CUMBERLAND
90	47	53.10	US 40	FRANKLIN TWP.	GLOUCESTER
91	49	9.07	NJ 45 & NEW MARKET ST.	SALEM	SALEM
92	49	36.35	HIGH ST.	MILLVILLE	CUMBERLAND
93	49	53.08	NJ 50	UPPER TWP.	CAPE MAY
94	70	8.30	NJ 73 CIRCLE	EVESHAM TWP.	BURLINGTON
95	70	12.30	EVESBORO RD.	MEDFORD TWP.	BURLINGTON
96	70	46.50	RIDGEWAY RD.	MANCHESTER TWP.	OCEAN
97	72	21.00	NAUTILUS DR.	STAFFORD TWP.	OCEAN
98	72	26.10	CR680 (BAY AVE.), CR16 (MORRIS BLVD.), STEVENS DR.	STAFFORD TWP.	OCEAN
99	77	2.77	CR622 (CORNWELL DR.)	UPPER DEERFIELD TWP.	CUMBERLAND
100	78	50.00 50.90	INTCHGE 49 & 50 (VALLEY ST. TO VAUXHALL RD.)	UNION TWP.	UNION
101	82	1.14	CR633 (BURNETT AVE. & SPRUCE ST.)	UNION TWP.	UNION
102	82	1.40	RAHWAY AVE.	UNION TWP.	UNION
103	82	3.87	CR509 (SALEM RD.)	UNION TWP.	UNION
104	82	4.32	GREEN LA. & PLANT DRIVEWAY	UNION TWP.	UNION
105	82	4.85	NJ 439 (NORTH AVE.)	UNION TWP.	UNION
106	88	6.00 6.30	VIC. OF VANZILE RD.	BRICK TWP.	OCEAN
107	94	28.18	CR623 (SUNSET INN LIMECREST RD.)	LAFAYETTE TWP.	SUSSEX
108	95	35.20	NEW DURHAM RD.	EDISON TWP.	MIDDLESEX
109	95	36.11 36.19	NJ 27	EDISON TWP.	MIDDLESEX
110	124	12.98	CR630A (VAUXHALL RD.)	UNION TWP.	UNION
111	166	1.27	WASHINGTON ST.	DOVER TWP.	OCEAN
112	166	2.24	OLD FREEHOLD RD.	DOVER TWP.	OCEAN

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Location number is keyed to Figure 19.



**APPENDIX 2  
LONGER RANGE AND CONTINUING NEEDS  
CATEGORY 2 SPOT CONGESTION PROBLEMS  
PRIORITY 2 (CONT'D)**

Loc. No.	Route	Mile- post(s)	Description	Municipality	County
113	168	2.48	BLACKWOOD-CLEMENTON RD., CHURCH ST.	GLOUCESTER TWP.	CAMDEN
114	168	7.03	BROWNING RD.	BELLMAWR	CAMDEN
115	202	11.85	REAVILLE AVE.	FLEMINGTON	HUNTERDON
116	202	12.55	CR514 SPUR (CHURCH ST., VOORHEES CRNR. RD.)	RARITAN TWP.	HUNTERDON
117	206	33.75	CR660 (OLD YORK RD.)	MANSFIELD/ BORDENTOWN TWPS.	BURLINGTON
118	206	48.15 48.39	I-95 TO FRANKLIN CRNR. RD.	LAWRENCE TWP.	MERCER
119	206	79.35	CR523 (MAIN ST. & LAMINGTON RD.)	BEDMINSTER TWP.	SOMERSET
120	206	103.92 103.96	CR517 (LENAPE RD.)	ANDOVER	SUSSEX
121	287	2.90	S. RANDOLPHVILLE RD.	PISCATAWAY TWP.	MIDDLESEX
122	287	4.10	POSSUMTOWN RD.	PISCATAWAY TWP.	MIDDLESEX
123	287	5.50	RAMP TO NJ 18 /CR514 SPUR (RIVER RD.)	PISCATAWAY TWP.	MIDDLESEX
124	444	141.30	INTCHGE. 140	UNION TWP.	UNION

**PRIORITY 3**

1	1A	3.20	US 206, CONNECTION TO US 1, BRUNSWICK AVE. & EXTENSION	TRENTON	MERCER
2	3	7.60	NJ TPKE. (INTCHGE. 16W)	E. RUTHERFORD	BERGEN
3	4	0.40	BOULEVARD	ELMWOOD PARK	BERGEN
4	4	0.85	E. 54TH ST.	ELMWOOD PARK	BERGEN
5	9	16.72	CR601 (AVALON BLVD., OCEAN DR.)	MIDDLE TWP.	CAPE MAY
6	9	28.75	CR623/585 (ROOSEVELT BLVD.)	UPPER TWP.	CAPE MAY
7	9	32.60	MAYS LANDING RD.	SOMERS POINT/ LINWOOD	ATLANTIC
8	9	36.35	OAK AVE.	SOMERS POINT/ LINWOOD	ATLANTIC
9	9	37.65	MILL RD.	NORTHFIELD	ATLANTIC
10	9	38.40	JACKSON AVE.	NORTHFIELD	ATLANTIC
11	9	40.05	WASHINGTON AVE.	PLEASANTVILLE	ATLANTIC
12	9	41.15	CR646 (DELILAH RD.)	PLEASANTVILLE	ATLANTIC
13	9	81.30 81.60	BAY AVE. & MILL ST. TO CR614 (LACEY RD.)	LACEY TWP.	OCEAN
14	9	89.75	NJ 166, ANCHOR AVE., OCEAN AVE.	BEACHWOOD	OCEAN
15	9	101.30	CR528 (CENTRAL AVE.)	LAKEWOOD TWP.	OCEAN
16	9	102.70	KENNEDY BLVD.	LAKEWOOD TWP.	OCEAN
17	9W	4.00	E. CLINTON AVE.	TENAFLY	BERGEN
18	9W	7.20	OLD CLOSTER DOCK RD.	ALPINE	BERGEN
19	9W	10.85	PALISADES INTERSTATE PKWY. (EXIT 4)	ALPINE	BERGEN

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Location number is keyed to Figure 19.

**APPENDIX 2  
LONGER RANGE AND CONTINUING NEEDS  
CATEGORY 2 SPOT CONGESTION PROBLEMS  
PRIORITY 3 (CONT'D)**

<b>Loc. No.</b>	<b>Route</b>	<b>Mile- post(s)</b>	<b>Description</b>	<b>Municipality</b>	<b>County</b>
20	17	2.70	RUTHERFORD AVE.	RUTHERFORD/ LYNDHURST TWP.	BERGEN
21	17	4.22	CR532 (UNION AVE.)	E. RUTHERFORD	BERGEN
22	17	16.30	W. SADDLE RIVER RD. & CR62 (FRANKLIN TPKE.)	PARAMUS	BERGEN
23	18	42.20	NJ 27, WATER ST.	NEW BRUNSWICK	MIDDLESEX
24	22	50.70	PARKWAY AVE., MOUNTAIN AVE., PARK DR.	MOUNTAINSIDE	UNION
25	22	51.70	CR635 (MOUNTAIN AVE.)	MOUNTAINSIDE	UNION
26	22	54.06	CR618 (N. MICHIGAN AVE.)	KENILWORTH	UNION
27	23	39.59 39.70	GROVE ST. TO NJ 284 (E. MAIN ST.)	SUSSEX	SUSSEX
28	27	20.00	TALMADGE RD.	EDISON TWP.	MIDDLESEX
29	27	22.08	MAIN ST.	METUCHEN	MIDDLESEX
30	27	29.92	STILES ST.	LINDEN	UNION
31	27	32.95	NJ 439 (S. ELMORA AVE.)	ELIZABETH	UNION
32	27	33.81	W. JERSEY ST.	ELIZABETH	UNION
33	27	33.94	GRAND ST.	ELIZABETH	UNION
34	27	34.05	NJ 27 & NJ 28 (CHERRY ST.)	ELIZABETH	UNION
35	27	34.47	MAGNOLIA AVE. & PRINCE ST.	ELIZABETH	UNION
36	27	34.75	SALEM AVE.	ELIZABETH	UNION
37	28	3.30	MAPLE ST. & DIVISION ST.	SOMERVILLE	SOMERSET
38	28	3.38	S. BRIDGE ST.	SOMERVILLE	SOMERSET
39	28	18.40	LA GRANDE AVE.	FANWOOD	UNION
40	28	21.10	CENTER ST.	GARWOOD	UNION
41	28	22.20	NORTH UNION AVE.	CRANFORD TWP.	UNION
42	28	22.47	SPRINGFIELD AVE. & CENTENNIAL AVE.	CRANFORD TWP.	UNION
43	28	24.53	WALNUT ST.	ROSELLE PK.	UNION
44	28	26.30	MAGIE AVE. & ORCHARD ST.	ELIZABETH	UNION
45*	30	6.66	SHORE RD.	ABSECON	ATLANTIC
46*	30	7.15	US 9 (NEW RD.)	ABSECON	ATLANTIC
47	30	29.07	US 206 & NJ 54	HAMMONTON	ATLANTIC
48	31	6.15	CR546 (PENNINGTON RD.), CR635 (MAIN ST.) CIRCLE	HOPEWELL TWP.	MERCER
49	31	33.50	CR513 (HALSTEAD ST.)	CLINTON TWP.	HUNTERDON
50	33	27.88	NJ 79	FREEHOLD	MONMOUTH
51	33	35.10 35.30	NJ 33/34 INTCHGE.	HOWELL TWP.	MONMOUTH
52	33	36.27	NJ 34, CR547 CIRCLE	WALL TWP.	MONMOUTH
53	34	2.60	CR524 CIRCLE	WALL TWP.	MONMOUTH
54	35	17.20	CR524 SPUR CIRCLE	WALL TWP.	MONMOUTH
55	35	22.10	S. CONCOURSE AVE. THRU SYLVANIA AVE.	NEPTUNE	MONMOUTH
56	35	24.92	NJ 66	NEPTUNE TWP.	MONMOUTH

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Location number is keyed to Figure 19.

**APPENDIX 2  
LONGER RANGE AND CONTINUING NEEDS  
CATEGORY 2 SPOT CONGESTION PROBLEMS  
PRIORITY 3 (CONT'D)**

<b>Loc. No.</b>	<b>Route</b>	<b>Mile- post(s)</b>	<b>Description</b>	<b>Municipality</b>	<b>County</b>
57	35	33.70	CHESTNUT ST., PETERS PL.	RED BANK	MONMOUTH
58	35	33.95	W. FRONT ST., PEARL ST.	RED BANK	MONMOUTH
59	35	43.90 44.37	CR516 (MAPLE PL.) TO MATAWAN CREEK BRIDGE	KEYPORT/ ABERDEEN TWP.	MONMOUTH
60	36	2.80	NJ 71 (MONMOUTH RD.)	W. LONG BRANCH	MONMOUTH
61	37	31.52	NJ 70 CIRCLE	LAKEHURST	OCEAN
62	38	5.50	NJ 73, CR611 (KINGS HIGHWAY)	MAPLE SHADE TWP.	BURLINGTON
63	38	6.10	CR608 (LENOLA RD.)	MAPLE SHADE TWP.	BURLINGTON
64*	40	10.70	NJ 45, CR672 (MAIN ST.)	WOODSTOWN	SALEM
65	40	47.02	CR559 (MAIN ST.)	HAMILTON TWP.	ATLANTIC
66	40	51.70	US 322 CIRCLE	MCKEE CITY	ATLANTIC
67	40	57.40	SHORE MALL	EGG HARBOR TWP.	ATLANTIC
68	40	58.62	NOAHS RD.	PLEASANTVILLE	ATLANTIC
69	40	58.95	DOUGHTY RD.	PLEASANTVILLE	ATLANTIC
70	41	13.80	OLD KINGS HIGHWAY	MAPLE SHADE TWP.	BURLINGTON
71	42	6.20 6.40	ATL. CITY EXPY. (INTCHGE. 44), NJ 168 (BLACK HORSE PK.)	WASHINGTON TWP.	GLOUCESTER
72	45	22.50	CR632/676 (BERKLEY RD. & UNION ST.)	MANTUA TWP.	GLOUCESTER
73	46	21.00	STEIGER ST.	HACKETTSTOWN	WARREN
74	46	30.20	NJ 183 & US 206 CIRCLE	NETCONG	MORRIS
75	47	3.00 3.30	GDN. ST. PKWY. (INTCHGE. 4) TO 6TH ST.	MIDDLE TWP.	CAPE MAY
76	47	41.76 42.00	CR667 (SHARP ST.) TO BLUEBIRD LA.	MILLVILLE	CUMBERLAND
77	47	42.00 42.15	BLUEBIRD LA. TO TRAIL	MILLVILLE	CUMBERLAND
78	47	72.85	CR645/646 (CAUFIELD AVE.)	DEPTFORD TWP.	GLOUCESTER
79	47	74.95	CR551 (BROADWAY AVE.)	WESTVILLE	GLOUCESTER
80	49	1.12	SHOPPING CENTER/SOUTH RD.	PENNSVILLE	SALEM
81	49	9.20	CR665 (WALNUT ST.)	SALEM	SALEM
82	49	25.5	LAUREL ST.	BRIDGETON	CUMBERLAND
83	49	36.25	BUCK ST.	MILLVILLE	CUMBERLAND
84	70	13.90	CR541 CIRCLE	MEDFORD TWP.	BURLINGTON
85	70	18.55	US 206 CIRCLE	SOUTHAMPTON TWP.	BURLINGTON
86	70	26.35	CR644, NJ 72 CIRCLE	PEMBERTON/ WOODLAND TWPS.	BURLINGTON
87	70	43.40	S. UNION AVE., UNION AVE., PINE & MYRTLE ST. CIRCLE	LAKEHURST	OCEAN
88	70	55.60	GREEN GROVE RD.	BRICK TWP.	OCEAN
89	73	17.80	CR689 (MILFORD RD.), CR708 (WALKER AVE.) (BERLIN CIRCLE)	BERLIN TWP.	CAMDEN

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**APPENDIX 2  
LONGER RANGE AND CONTINUING NEEDS  
CATEGORY 2 SPOT CONGESTION PROBLEMS  
PRIORITY 3 (CONT'D)**

Loc. No.	Route	Mile- post(s)	Description	Municipality	County
90	73	21.57	HADDONFIELD-KRESSON RD. GIBBSBORO-MILFORD & BRADDOCK MILL RD.	VOORHEES TWP.	CAMDEN
91	78	54.40	FABYAN PL. (INTCHGE. 55)	IRVINGTON	ESSEX
92	80	58.32	MAIN ST. EXIT WB, MAIN ST. AT GREEN ST.	PATERSON	PASSAIC
93	80	65.12 65.19	S. SUMMIT AVE.(INTCHGE. 64)	HACKENSACK	BERGEN
94	93	1.15	CR501 (CENTRAL BLVD.)	PALISADES PARK	BERGEN
95*	93	3.37 3.41	NJ 4	ENGLEWOOD	BERGEN
96	94	33.10	CR631 (NORTH CHURCH RD.)	HARDYSTON TWP.	SUSSEX
97	95	71.37	NB EXIT RAMP, SB ENTRANCE RAMP FROM ENGLEWOOD INDUST. PARK.	LEONIA	BERGEN
98	124	9.40 9.70	S. TERRACE TO APTS.	SUMMIT	UNION
99	124	11.24	MAIN ST.	SPRINGFIELD TWP.	UNION
100	124	12.58 12.90	CR638 (VALLEY ST.)	UNION TWP.	UNION
101	130	0.60	NJ 140 (SLAPES CORNER RD.)	CARNEY'S PT. TWP.	SALEM
102	130	3.67	NJ 48 & CR675	PENNS GROVE	SALEM
103	130	70.18	CR539 (BRICKYARD RD.) CIRCLE	CRANBURY TWP.	MIDDLESEX
104	166	1.70	VIC. OF DAYTON AVE.	DOVER TWP.	OCEAN
105	181	5.40 5.79	BELL ST. TO CR517 (SPARTA AVE.)	SPARTA TWP.	SUSSEX
106	183	0.67	ALLEN ST.	NETCONG	MORRIS
107	183	0.90	MAIN ST.	NETCONG	MORRIS
108	202	11.60	RARITAN ST.	RARITAN TWP.	HUNTERDON
109	202	46.05 46.11	FLAGLER ST. TO BRANCH OF WHIPPANY RIVER	MORRISTOWN	MORRIS
110	206	45.00	US 1 ALT., CONNECT. TO US 1 BRUNSWICK AVE., BRUNSWICK AVE. EXT.	TRENTON/ LAWRENCE TWP.	MERCER
111*	206	66.10	ANDRIA DR.	HILLSBOROUGH TWP.	SOMERSET
112*	206	67.00	TRIANGLE RD.	HILLSBOROUGH TWP.	SOMERSET
113*	206	67.72	VALLEY RD.	HILLSBOROUGH TWP.	SOMERSET
114	206	106.75	CR611 (SPRINGDALE RD.)	ANDOVER TWP.	SUSSEX
115	206	112.55	CR626 (HALSEY-BAILSVILLE RD.)	HAMPTON TWP.	SUSSEX
116	287	6.00	RAMP TO CR527 (EASTON AVE.)	FRANKLIN TWP.	SOMERSET
117	287	7.90	RAMP TO CR610/623 (CANAL RD.)	FRANKLIN TWP.	SOMERSET
118	322	40.90	CR559 CIRCLE	HAMILTON TWP.	ATLANTIC
119	439	1.82	LINDEN AVE.	ELIZABETH	UNION
120	439	1.95	W. JERSEY AVE.	ELIZABETH	UNION
121	439	2.11	W. GRAND AVE.	ELIZABETH	UNION
122	444	136.60	RAHWAY RIVER	CLARK TWP.	UNION

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Location number is keyed to Figure 19.

**APPENDIX 3  
LONGER RANGE AND CONTINUING NEEDS  
CATEGORY 3 BRIDGE PROBLEMS**

<b>Loc. No.</b>	<b>Route</b>	<b>Mile- Post</b>	<b>Structure No.</b>	<b>Description</b>	<b>County</b>
1	1	013.05	1201151	US 1 OVER FORRESTAL RD.	MIDDLESEX
2	1	025.70	1202152	US 1 OVER RARITAN RIVER RR & LOCAL RDS.	MIDDLESEX
3	1	026.50	1202155	RYDERS LANE (CR617) OVER US 1	MIDDLESEX
4	1	032.50	1204150	US 1 OVER LEHIGH VALLEY RR (CONRAIL)	MIDDLESEX
5	1	035.58	1204153	US 1 OVER READING RR (CONRAIL)	MIDDLESEX
6	1+9	037.80	1205151	US 1&9 OVER PENN RR PERTH AMBOY BRANCH	MIDDLESEX
7	1+9	038.65	2001150	US 1&9 OVER RAHWAY RIVER & HAZELWOOD AVE.	UNION
8	1+9	044.00	2002150	ELIZABETH VIADUCT	UNION
9	1+9	044.65	2002152	MAGNOLIA AVE. OVER US 1&9	UNION
10	1+9	047.69	0701153	US 1&9 OVER PEDDIE DITCH	ESSEX
11	1+9	047.78	0702150	US 1&9 NB OVER US 22 EB	ESSEX
12	1+9	047.87	0702153	US 1&9 SB & US 22 WB OVER NJ 21 NB	ESSEX
13	1+9	049.40	0703153	SOUTH ST. OVER WAVERLY RR YARDS	ESSEX
14	1+9	051.70	0704150	PULASKI SKYWAY OVER PASSAIC RIVER	ESSEX
15	1+9	052.80	0901150	PULASKI SKYWAY OVER HACKENSACK RIVER	HUDSON
16	1+9	054.65	0902150	US 1&9 TONNELLE AVE. OVER DL&W RR	HUDSON
17	1+9	054.75	0902151	US 1&9 TONNELLE AVE. OVER E-L RR	HUDSON
18	1+9	057.08	0902152	US 1&9 TONNELLE AVE. OVER PT&T RR	HUDSON
19	1+9	058.30	0903150	US 1&9 OVER NYS&W RR & CONRAIL	HUDSON
20	1+9	060.60	0201150	US 1&9 OVER NYS&W RAILROAD	BERGEN
21	1+9T	000.73	0705151	US 1&9T OVER PASSAIC RIVER	ESSEX
22	1+9T	002.55	0906151	LINCOLN PARK SERVICE RD. US 1&9T	HUDSON
23	1+9T	003.95	0906156	US 1&9T OVER E-L RR, ST. PAULS AVE.	HUDSON
24	1+9T	004.14	0906157	RAMP FROM US 1B TO US 1&9T SB	HUDSON
25	1+9T	004.14	0906158	RAMP FROM US 1B TO US 1&9T/TONNELLE AVE.	HUDSON
26	1A	004.40	1102150	US 1A OVER SHABAKUNK CREEK	MERCER
27	1B	000.00	0904152	US 1B DEPRESSED ROADWAY	HUDSON
28	1B	001.30	0904154	US 1B 14TH ST. VIADUCT	HUDSON
29	3	001.25	1601151	NJ 3 OVER BROAD ST. (CR509)	PASSAIC
30	3	002.81	1601154	NJ 3 OVER ERIE RR (CONRAIL)	PASSAIC
31	3	003.40	1601155	NJ 3 OVER PASSAIC AVE. (CR603)	PASSAIC
32	3	003.80	1601156	NJ 3 OVER MAIN AVE.	PASSAIC
33	3	004.60	1603161	NJ 3 OVER DL&W RR	PASSAIC
34	3	004.95	0203150	NJ 3 OVER PASSAIC RIVER & NJ 21	BERGEN
35	3	006.85	0204150	NJ 3 OVER BERRY'S CREEK	BERGEN
36	3	008.50	0204151	NJ 3 WB OVER HACKENSACK RIVER, GRACE ST.	BERGEN
37	4	003.14	0206153	NJ 4 OVER SPROUT BROOK	BERGEN
38	4	003.55	0206154	FAIRVIEW AVE. OVER NJ 4	BERGEN
39	4	004.30	0206159	FORREST AVE. OVER NJ 4	BERGEN
40	4	005.43	0206163	NJ 4 KINDERKAMACK RD., RR, COLES BROOK	BERGEN
41	4	005.70	0206165	HACKENSACK AVE. OVER NJ 4	BERGEN
42	4	006.25	0206167	NJ 4 OVER RIVER RD.	BERGEN
43	4	007.00	0206169	NJ 4 OVER NY RR, PALISADE AVE., WINDSOR RD.	BERGEN

Location number is keyed to Figure 20.

**APPENDIX 3**  
**CATEGORY 3 BRIDGE PROBLEMS (CONT'D)**

<b>Loc. No.</b>	<b>Route</b>	<b>Mile- post</b>	<b>Structure No.</b>	<b>Description</b>	<b>County</b>
44	4	007.15	0206171	NJ 4 OVER QUEEN ANNE RD.	BERGEN
45	4	007.37	0206172	MARGARET ST. OVER NJ 4	BERGEN
46	4	007.62	0206173	NJ 4 OVER TEANECK RD.	BERGEN
47	4	008.90	0206177	NJ 4 OVER NORDHOFF PLACE AND S. DEAN ST.	BERGEN
48	4	009.06	0206179	NJ 4 OVER GRAND AVE-CR 501	BERGEN
49	4	009.55	0206181	NJ 4 OVER FLAT ROCK BROOK	BERGEN
50	4	009.65	0206182	JONES RD. OVER NJ 4	BERGEN
51	4	010.48	0206184	NJ 4 EB OVER I-95 EB & WB EXPRESS	BERGEN
52	5	000.47	0207150	NJ 5 OVER DELIA BLVD.	BERGEN
53	7	000.34	0909150	WITTPENN BRIDGE OVER HACKENSACK RIVER	HUDSON
54	7	002.50	0910153	NJ 7 OVER ERIE LACKAWANNA RR	HUDSON
55	7	002.86	0910154	NJ 7 OVER ERIE LACKAWANNA RR	HUDSON
56	9	056.95	0302150	US 9 OVER BASS RIVER	BURLINGTON
57	9	081.25	1502156	US 9 OVER N. BRANCH FORKED RIVER	OCEAN
58	9	091.05	1503151	US 9 & GSP SB OVER MAGNOLIA AVE.	OCEAN
59	9	091.67	1503155	LAKEHURST RD. OVER US 9 & GSP	OCEAN
60	9	092.30	1503157	US 9 SB & GSP SB OVER NJ 37	OCEAN
61	9	113.90	1302151	FREEHOLD RACE TRACK RAMP OVER US 9	MONMOUTH
62	9	118.45	1303156	GORDON'S CORNER RD. OVER US 9	MONMOUTH
63	9	119.90	1303161	UNION HILL RD. OVER US 9	MONMOUTH
64	9	123.90	1206157	TICETOWN RD. OVER US 9	MIDDLESEX
65	9	129.93	1208151	US 9 & NJ 35 OVER WASHINGTON AVE.	MIDDLESEX
66	9	130.35	1208155	US 9 & NJ 35 OVER RARITAN ST.	MIDDLESEX
67	9	131.18	1208158	US 9 & NJ 35, NB OVER CIRCLE	MIDDLESEX
68	9	135.21	1210151	US 9 OVER METUCHEN AVE.	MIDDLESEX
69	9	135.90	1210154	US 9 SB OVER GREEN ST. CONNECTOR	MIDDLESEX
70	9W	000.65	0209152	US 9W OVER NJ 67 SB (LEMOINE AVE)	BERGEN
71	10	001.86	1401151	NJ 10 OVER SUSSEX TURNPIKE RAMP	MORRIS
72	10	007.10	1401156	NJ 10 OVER MILL BROOK	MORRIS
73	10	010.50	1401161	NJ 10 OVER ERIE-LACKAWANNA RR	MORRIS
74	10	010.60	1401163	NJ 10 OVER NJ 53	MORRIS
75	10	014.18	1402151	PARSIPPANY RD. (CR511) OVER NJ 10	MORRIS
76	10	015.72	1402152	NJ 10 OVER WHIPPANY RIVER	MORRIS
77	10	017.72	1402153	NJ 10 OVER PASSAIC RIVER	MORRIS
78	15	002.30	1403152	NJ 15 NB OVER MT HOPE MINERAL RR	MORRIS
79	15	002.30	1403153	NJ 15 SB OVER MT HOPE MINERAL RR	MORRIS
80	15	002.45	1404151	NJ 15 SB OVER UNION TURNPIKE	MORRIS
81	17	008.15	0214150	NJ 17 NB OVER I-80	BERGEN
82	17	009.22	0214152	ESSEX ST. OVER NJ 17	BERGEN
83	17	010.50	0214160	NJ 17 OVER PASSAIC AVE.	BERGEN
84	17	010.89	0214162	FARVIEW AVE. OVER NJ 17	BERGEN
85	17	013.05	0216150	NJ 17 OVER SPROUT BROOK	BERGEN
86	17	014.90	0216155	EAST RIDGEWOOD AVE. OVER NJ 17	BERGEN

*Location number is keyed to Figure 20.*



### APPENDIX 3 CATEGORY 3 BRIDGE PROBLEMS (CONT'D)

Loc. No.	Route	Mile- post	Structure No.	Description	County
87	17	016.10	0216157	NJ 17 OVER SADDLE RIVER	BERGEN
88	17	019.60	0217162	NJ 17 OVER ALLENDALE AVE.	BERGEN
89	17	023.00	0218150	SPRING ST. OVER NJ 17	BERGEN
90	18	005.75	1327159	MONMOUTH BLVD. OVER NJ 18	MONMOUTH
91	18	006.86	1327161	BRIGHTON AVE. OVER NJ 18	MONMOUTH
92	18	009.25	1328153	WEST BANGS AVE. OVER NJ 18	MONMOUTH
93	18	021.59	1324152	FIVE POINTS RD. OVER NJ 18 FWY.	MONMOUTH
94	18	024.90	1324160	BUCKLEY RD. OVER NJ 18	MONMOUTH
95	18	027.32	1325151	GORDON'S CORNER RD. OVER NJ 18	MONMOUTH
96	18	029.80	1325155	TEXAS RD. OVER NJ 18	MONMOUTH
97	18	034.80	1212150	NJ 18 OVER SOUTH RIVER MAIN ST., PCRR	MIDDLESEX
98	18	040.25	1213150	NJ 18 OVER WESTONS MILLS POND	MIDDLESEX
99	20F	001.40	1613154	NJ 20 FREEWAY OVER BROAD ST.	PASSAIC
100	21	000.60	0713151	NEWARK VIADUCT (NJ 21)	ESSEX
101	21	005.80	0716156	MAIN ST. OVER SECOND RIVER	ESSEX
102	21	009.53	1603154	RAMP 5 OVER NJ 21 AND RAMPS 3 & 7	PASSAIC
103	22	000.59	2101150	US 22 WB OVER US 22 EB RAMP	WARREN
104	22	000.65	2101153	MORRIS ST. OVER US 22 EB	WARREN
105	22	002.07	2101152	US 22 WB OVER NJ 57 EB	WARREN
106	22	020.30	1005151	US 22 OVER CENTRAL RR OF NJ	HUNTERDON
107	22	027.90	1005163	US 22 WB OVER S BRANCH ROCKAWAY CREEK	HUNTERDON
108	22	036.51	1802158	FOOTHILL RD. OVER US 22	SOMERSET
109	22	047.52	2003150	PARK AVE. OVER US 22	UNION
110	22	052.20	2003160	CR 509 SPUR OVER US 22	UNION
111	22	055.21	2003166	US 22 OVER CHESTNUT ST.	UNION
112	22	055.45	2003168	US 22 WB OVER BURKE BLVD.	UNION
113	22	055.90	2004159	US 22 WB OVER NJ 82	UNION
114	22	056.35	2004150	VAUX HALL RD. OVER US 22	UNION
115	22	057.50	2004153	US 22 OVER LIBERTY AVE. AND LVRR	UNION
116	22	058.22	2004155	HILLSIDE AVE. RAMP OVER US 22	UNION
117	22	060.02	0718152	US 22 OVER WAVERLY RR YARD	ESSEX
118	22	060.45	0718154	US 22 WB OVER NJ 21 SB	ESSEX
119	23	004.95	1604158	NJ 23 SB OVER US 46	PASSAIC
120	23	005.60	1604164	NJ 23 SB OVER I-80 & RAMP I	PASSAIC
121	23	005.70	1604165	NJ 23 NB & RAMP A OVER SINGAC BROOK	PASSAIC
122	23	007.10	1604153	NJ 23 OVER BOONTON RD. & DL&W RR	PASSAIC
123	23	009.60	1604157	NJ 23 OVER POMPTON RIVER	PASSAIC
124	23	011.78	1405152	NJ 23 OVER ERIE-LACKAWANNA RR	MORRIS
125	23	016.95	1405156	NJ 23 OVER PEQUANNOCK RIVER, HAMBURG TPK.	MORRIS
126	23	018.20	1605153	NJ 23 SB OVER PEQUANNOCK RIVER	PASSAIC
127	23	021.95	1605161	NJ 23 SB OVER PEQUANNOCK RIVER	PASSAIC
128	23	025.50	1605167	NJ 23 SB OVER PEQUANNOCK RIVER	PASSAIC
129	23	026.20	1605168	NJ 23 SB OVER PEQUANNOCK RIVER	PASSAIC

Location number is keyed to Figure 20.

**APPENDIX 3**  
**CATEGORY 3 BRIDGE PROBLEMS (CONT'D)**

<b>Loc. No.</b>	<b>Route</b>	<b>Mile- post</b>	<b>Structure No.</b>	<b>Description</b>	<b>County</b>
130	23	030.65	1903153	NJ 23 OVER BRANCH FRANKLIN LAKE	SUSSEX
131	23	031.80	1903154	NJ 23 OVER BRANCH FRANKLIN LAKE	SUSSEX
132	27	008.80	1216158	NJ 27 OVER SIX MILE RUN	MIDDLESEX
133	28	006.60	1806153	NJ 28 OVER ROUTE I-287	SOMERSET
134	28	010.00	121915	NJ 28 OVER BOUND BROOK	MIDDLESEX
135	29	000.20	1131150	BRIDGE ST. OVER NJ 29 NB	MERCER
136	29	015.48	1006151	NJ 29 OVER SWAN CREEK	HUNTERDON
137	29	019.70	1007159	NJ 29 OVER WICKECHEOKE CREEK	HUNTERDON
138	30	055.02	0405153	US 30 & US 130 OVER COOPER RIVER	CAMDEN
139	30	055.40	0406151	US 30 EB OVER US 130 NB	CAMDEN
140	30	056.47	0406156	BAIRD BLVD. OVER US 30	CAMDEN
141	30	057.05	0406158	US 30 OVER COOPER RIVER	CAMDEN
142	31	007.00	1119150	NJ 31 OVER READING RR	MERCER
143	31	023.12	1012152	NJ 31 OVER BUSHKILL CREEK	HUNTERDON
144	31	025.35	1012155	NJ 31 OVER LEHIGH VALLEY RR	HUNTERDON
145	31	025.44	1012156	NJ 31 OVER S BRANCH RARITAN RIVER	HUNTERDON
146	31	037.18	1013155	SANATORIUM RD. OVER SPRUCE RUN	HUNTERDON
147	33	007.70	1113150	NJ 33 OVER PENN CENTRAL RR	MERCER
148	34	026.70	1221151	NJ 34 SB OVER US 9 NB	MIDDLESEX
149	35	015.60	1310152	SCHOOL HOUSE RD. OVER NJ 35	MONMOUTH
150	35	021.70	1311150	NJ 35 OVER SHARK RIVER	MONMOUTH
151	35	021.84	1311151	NJ 35 OVER N CHANNEL SHARK RIVER	MONMOUTH
152	35	034.50	1312154	NJ 35 OVER NAVESINK RIVER	MONMOUTH
153	35	048.20	1222153	PINE AVE. OVER NJ 35 NB	MIDDLESEX
154	35	051.60	1223150	VICTORY BRIDGE OVER RARITAN RIVER	MIDDLESEX
155	35	052.60	1223154	NJ 35 OVER LEHIGH VALLEY RR	MIDDLESEX
156	36	011.77	1315150	NJ 36 OVER SHREWSBURY RIVER	MONMOUTH
157	38	014.30	0305152	NJ 38 OVER SO BRANCH RANCOCAS CREEK	BURLINGTON
158	40	002.55	1701151	US 40 WB OVER W BRANCH GAME CREEK	SALEM
159	40	008.60	1702154	US 40 OVER SALEM RIVER	SALEM
160	40	027.20	0801153	US 40 & NJ 47 OVER WJ & SS RR	GLOUCESTER
161	40	047.40	0107150	US 40 OVER BABCOCK CREEK	ATLANTIC
162	41	003.37	0802150	NJ 41 OVER NJ 42	GLOUCESTER
163	42	013.00	0804154	NJ 42 SB OVER BIG TIMBER CREEK	GLOUCESTER
164	44	006.62	0806151	NJ 44 OVER MANTUA CREEK	GLOUCESTER
165	46	000.75	2107156	US 46 OVER PAULINS KILL	WARREN
166	46	016.55	2108155	US 46 OVER LEHIGH & HUDSON RIVER RR	WARREN
167	46	022.80	1407154	US 46 OVER BRANCH OF MINE BROOK	MORRIS
168	46	032.30	1408153	LANDING RD. OVER US 46 WB	MORRIS
169	46	056.25	1606175	US 46 WB & RAMP C OVER RAMPS D&E	PASSAIC
170	46	056.35	1606176	US 46 EB & RAMPS D&E OVER NJ 23 NB & RAMP G	PASSAIC
171	46	056.35	1606177	US 46 WB & RAMP I OVER NJ 23 NB	PASSAIC
172	46	058.70	1606163	US 46 OVER BROWERTOWN RD.	PASSAIC

*Location number is keyed to Figure 20.*

**APPENDIX 3**  
**CATEGORY 3 BRIDGE PROBLEMS (CONT'D)**

<b>Loc. No.</b>	<b>Route</b>	<b>Mile- post</b>	<b>Structure No.</b>	<b>Description</b>	<b>County</b>
173	46	060.05	1606172	US 46 OVER VALLEY RD.	PASSAIC
174	46	061.28	1607154	US 46 OVER BROAD ST.	PASSAIC
175	46	061.60	1607156	US 46 OVER ERIE-LACKAWANNA RR	PASSAIC
176	46	061.70	1607157	US 46 OVER ERIE-LACKAWANNA RR	PASSAIC
177	46	063.00	1607163	US 46 OVER LAKEVIEW AVE.	PASSAIC
178	46	063.20	0202151	US 46,1&9 OVER E. BRINKERHOFF AVE.	BERGEN
179	46	063.30	0202152	US 46,1&9 OVER E. CENTRAL BLVD.	BERGEN
180	46	063.40	0202153	US 46,1&9 OVER E. PALISADES BLVD.	BERGEN
181	46	063.60	0202154	US 46,1&9 OVER E. EDSALL BLVD.	BERGEN
182	46	063.75	0202155	US 46,1&9 OVER OAKDENE AVE.	BERGEN
183	46	063.85	1607166	US 46 EB OVER NJ 20 NB	PASSAIC
184	46	064.05	0220150	US 46 OVER RIVER DRIVE	BERGEN
185	46	064.35	0202158	US 1,9,46 OVER MAIN ST.	BERGEN
186	46	064.45	0202160	US 46 EB OVER NJ 4 RAMPS B & L	BERGEN
187	46	064.45	0202161	US 46 WB OVER I-95	BERGEN
188	46	066.50	0220157	US 46 OVER SADDLE RIVER	BERGEN
189	46	067.65	0220161	US 46 OVER BOULEVARD	BERGEN
190	46	067.95	0221150	US 46 OVER TERRACE AVE.	BERGEN
191	46	068.15	0221152	US 46 OVER NJ 17 NB	BERGEN
192	46	070.70	0221156	US 46 OVER TEANECK RD.	BERGEN
193	46	071.55	0222151	US 46 OVER ERIE LACKAWANNA RR	BERGEN
194	46	071.65	0222152	US 46 OVER GRAND AVE. (NJ 93)	BERGEN
195	46	071.80	0222153	US 46 UNDER BROAD AVE.	BERGEN
196	46	072.00	0222154	ROFF AVE. OVER US 46	BERGEN
197	46	072.20	0202150	US 1,9,46 OVER E HOMESTEAD AVE.	BERGEN
198	47	012.10	0507152	NJ 47 OVER BIDWELL'S DITCH	CAPE MAY
199	47	033.80	0601151	NJ 47 OVER MANUMUSKIN RIVER	CUMBERLAND
200	49	008.25	1707150	NJ 49 OVER SALEM RIVER	SALEM
201	49	012.40	1708151	NJ 49 OVER ALLOWAY CREEK	SALEM
202	50	018.95	0112150	NJ 50 OVER GREAT EGG HARBOR RIVER	ATLANTIC
203	50	021.05	0112153	NJ 50 OVER US 322	ATLANTIC
204	56	005.50	1716150	NJ 56 OVER RAINBOW LAKE	SALEM
205	57	001.40	2105152	NJ 57 OVER LOPATCONG CREEK	WARREN
206	57	006.45	2105159	NJ 57 OVER BRANCH POHATCONG CREEK	WARREN
207	57	008.85	2105163	NJ 57 OVER BRASS CASTLE CREEK	WARREN
208	57	009.59	2105164	NJ 57 OVER POHATCONG CREEK	WARREN
209	57	011.30	2106151	NJ 57 OVER SHABBACONG CREEK	WARREN
210	57	012.15	2106153	NJ 57 OVER CONRAIL	WARREN
211	57	013.96	2106156	NJ 57 OVER BRANCH MUSCONETCONG RIVER	WARREN
212	57	015.53	2106158	NJ 57 OVER BRANCH MUSCONETCONG RIVER	WARREN
213	57	018.20	2106164	NJ 57 OVER HANCES BROOK	WARREN
214	57	020.50	2106165	NJ 57 OVER TROUT BROOK	WARREN
215	63	000.25	0223150	NJ 63 OVER FAIRVIEW AVE.	BERGEN

*Location number is keyed to Figure 20.*



**APPENDIX 3  
CATEGORY 3 BRIDGE PROBLEMS (CONT'D)**

<b>Loc. No.</b>	<b>Route</b>	<b>Mile- post</b>	<b>Structure No.</b>	<b>Description</b>	<b>County</b>
216	63	001.80	0223151	NJ 63 OVER NJ 5	BERGEN
217	70	000.10	0413150	NJ 70 WB OVER NJ 38	CAMDEN
218	70	016.40	0310153	NJ 70 OVER BEAR SWAMP RIVER	BURLINGTON
219	70	032.90	0311153	NJ 70 OVER POLE BRIDGE BRANCH	BURLINGTON
220	70	044.50	1509152	NJ 70 OVER CENTRAL RR OF NJ	OCEAN
221	70	054.65	1510155	NJ 70 OVER SOUTH BRANCH METEDECONK RIVER	OCEAN
222	70	058.25	1511150	NJ 70 OVER MANASQUAN RIVER	OCEAN
223	71	005.90	1321150	NJ 71 OVER SHARK RIVER	MONMOUTH
224	71	009.46	1321152	NJ 71 OVER DEAL LAKE	MONMOUTH
225	71	011.60	1321154	NJ 71 OVER NY&LB RAILROAD	MONMOUTH
226	72	026.38	1513151	NJ 72 OVER HILLIARDS THOROFARE	OCEAN
227	72	026.80	1513152	NJ 72 OVER MANAHAWKIN BAY	OCEAN
228	72	027.75	1513153	NJ 72 OVER WEST THOROFARE & U TURN	OCEAN
229	72	028.10	1513154	NJ 72 OVER EAST THOROFARE	OCEAN
230	73	028.72	0314154	NJ 73 NB OVER NJ 38	BURLINGTON
231	73	028.72	0314155	NJ 73 SB OVER NJ 38	BURLINGTON
232	73	029.85	0314151	CR 537 OVER NJ 73	BURLINGTON
233	73	031.90	0314153	NJ 73 OVER S. BRANCH PENNSAUKEN CREEK	BURLINGTON
234	76	000.75	0417153	MARKET ST. OVER I-76	CAMDEN
235	76	001.20	0417157	I-76 OVER US 130 SB	CAMDEN
236	76	001.31	0417158	I-76 NEWTON CREEK, CLEMM AVE, RR	CAMDEN
237	78	004.80	2113156	I-78 WB OVER STEWARTVILLE RD. & POHATCONG CK.	WARREN
238	78	006.32	2113159	I-78 EB OVER ASBURY RD. & MUSCONETCONG RIVER	WARREN
239	78	006.79	1014151	I-78 WB OVER NJ 173	HUNTERDON
240	78	006.99	1014152	I-78 EB OVER NJ TRANSIT	HUNTERDON
241	78	007.05	1014153	I-78 WB OVER CENTRAL RAILROAD	HUNTERDON
242	78	008.25	1014157	I-78 EB OVER TURKEY HILL RD.	HUNTERDON
243	78	033.92	1817162	MARTINSVILLE RD. (CR525) OVER I-78	SOMERSET
244	78	039.03	1817174	STIRLING RD. OVER I-78	SOMERSET
245	78	041.55	1817178	STONY HILL RD. OVER I-78	SOMERSET
246	78	050.00	2010175	I-78 WB OUTER OVER NJ 124-SPRGFLD	UNION
247	78	057.50	0725170	I-78 RAMPS C&D OVER US 1&9	ESSEX
248	78	057.60	0725169	RAMP 4 OVER RAMP 6	ESSEX
249	80	032.40	1412173	MILL RD. OVER I-80	MORRIS
250	80	032.45	1412174	I-80 EB OVER ROCKAWAY RIVER	MORRIS
251	80	034.00	1413150	I-80 EB OVER NJ 15	MORRIS
252	80	034.00	1413151	I-80 WB OVER NJ 15	MORRIS
253	80	034.00	1413152	I-80 RAMP D OVER NJ 15 RAMP A	MORRIS
254	80	036.35	1413161	MT. HOPE ROCKAWAY RD. OVER I-80	MORRIS
255	80	036.75	1413163	I-80 WB OVER STONEY BROOK RD.	MORRIS
256	80	037.30	1413165	I-80 WB OVER WHITE MEADOW RD.	MORRIS
257	80	037.50	1413169	I-80 WB & RAMP H/CENTRAL MINE RR	MORRIS
258	80	037.60	1413166	I-80 RAMP F OVER HIBERNIA AVE.	MORRIS

Location number is keyed to Figure 20.

### APPENDIX 3 CATEGORY 3 BRIDGE PROBLEMS (CONT'D)

Loc. No.	Route	Mile- post	Structure No.	Description	County
259	80	037.60	1413167	I-80 WB & RAMP H OVER HIBERNIA RD.	MORRIS
260	80	037.70	1413168	I-80 EB & RAMP F OVER CENTRAL MINE RR	MORRIS
261	80	038.00	1413173	MORRIS AVE. OVER BEAVER BROOK	MORRIS
262	80	038.62	1413174	I-80 EB & RAMP L OVER ROCKAWAY RIVER	MORRIS
263	80	039.37	1414153	I-80 WB RAMP A OVER DEN BROOK	MORRIS
264	80	046.30	1414179	I-80 WB OVER US 46 WB	MORRIS
265	80	047.15	1415152	I-80 EB OVER ROCKAWAY RIVER	MORRIS
266	80	048.40	1415158	I-80 WB OVER PASSAIC RIVER	MORRIS
267	80	042.70	1414166	LITTLETON RD., EB OVER I-80	MORRIS
268	80	056.40	1610153	I-80 OVER PASSAIC RIVER & LOCAL SREETS	PASSAIC
269	80	058.10	1610157	I-80 & RAMP H OVER SLOPE	PASSAIC
270	80	058.32	1610171	I-80 OVER MARSHALL & MAIN STS.	PASSAIC
271	80	058.65	1610159	I-80 VIADUCT OVER E-LRR & LOCAL SREETS	PASSAIC
272	80	058.80	1610160	I-80 OVER BECKWITH AVE. & RAMP'F'	PASSAIC
273	80	060.80	0225151	I-80 OVER RAMP A & RIVER DR.	BERGEN
274	80	060.90	0225152	I-80 OVER MARKET ST.	BERGEN
275	80	061.10	0225154	I-80 OVER S. CENTER ST.	BERGEN
276	80	061.70	0225156	I-80 OVER BLVD. RD.	BERGEN
277	80	061.95	0225159	I-80 OVER GSP MIDLAND AVE., E-L RR	BERGEN
278	80	063.66	0225166	MARKET ST. & SADDLE RIVER & MAIN ST. OVER I-80	BERGEN
279	80	063.80	0225167	RIVERVIEW AVE. OVER I-80	BERGEN
280	82	000.30	2012150	NJ 82 OVER RAHWAY RIVER	UNION
281	83	002.95	0512151	NJ 83 OVER RR RIGHT-OF-WAY	CAPE MAY
282	88	008.80	1515151	NJ 88 OVER PT. PLEASANT CANAL	OCEAN
283	94	009.40	2117159	NJ 94 OVER BLAIR CREEK	WARREN
284	94	035.20	1909152	NJ 94 OVER WALLKILL RIVER	SUSSEX
285	95	002.84	1120153	SCOTCH RD. OVER I-95	MERCER
286	95	035.90	1230164	I-95 SB OVER PCRR & RAMP A	MIDDLESEX
287	95	035.90	1230165	I-95 NB OVER PCRR & RAMP A	MIDDLESEX
288	95	036.13	1230158	I-95 SB OVER NJ 27	MIDDLESEX
289	95	037.45	1230152	I-95 NB OVER US 1	MIDDLESEX
290	95	037.47	1230151	I-95 SB OVER US 1	MIDDLESEX
291	95	038.36	1230163	I-95 SB OVER NJ TURNPIKE	MIDDLESEX
292	95	071.40	0230162	I-95 OVER NJ 93, FLAT ROCK BROOK, ELRR	BERGEN
293	130	008.80	1710152	US 130 OVER OLDMANS CREEK	SALEM
294	130	011.80	0817151	US 130 OVER RACCOON CREEK	GLOUCESTER
295	130	025.40	0818151	US 130 OVER BIG TIMBER CREEK	GLOUCESTER
296	130	026.40	0419151	US 130 OVER LITTLE TIMBER CREEK	CAMDEN
297	130	027.95	0420151	US 130 OVER MAIN BRANCH NEWTON CREEK	CAMDEN
298	130	030.00	0422150	US 130 OVER CHANDLER'S RUN	CAMDEN
299	130	041.04	0316152	US 130 OVER RANOCAS CREEK	BURLINGTON
300	130	051.60	0317155	US 130 OVER CRAFTS CREEK	BURLINGTON

Location number is keyed to Figure 20.

**APPENDIX 3**  
**CATEGORY 3 BRIDGE PROBLEMS (CONT'D)**

<b>Loc. No.</b>	<b>Route</b>	<b>Mile- post</b>	<b>Structure No.</b>	<b>Description</b>	<b>County</b>
301	130	068.90	1123152	US 130 OVER ROCKY BROOK	MERCER
302	130	070.00	1123153	US 130 OVER MILLSTONE RIVER	MERCER
303	147	000.05	0517152	NJ 147 OVER BEACH CREEK	CAPE MAY
304	166	000.70	1516150	NJ 166 OVER JAKES BRANCH	OCEAN
305	166	001.15	1516152	NJ 166 OVER N. CHANNEL TOMS RIVER	OCEAN
306	167	001.60	0322150	NJ 167 OVER LOVELAND THOROFARE	BURLINGTON
307	169	004.78	0913153	NJ 169 OVER CENTRAL RR & LVRR	HUDSON
308	173	001.31	2103152	NJ 173 OVER POHATCONG CREEK	WARREN
309	179	003.75	1020150	NJ 179 OVER ALEXAUKEN CREEK	HUNTERDON
310	180	023.22	1512153	NJ 180 OVER MILL CREEK	OCEAN
311	183	000.59	1417161	NJ 183 OVER E-L RR	MORRIS
312	184	000.35	1232150	NJ 184 OVER US 9	MIDDLESEX
313	195	014.35	1330159	CLARKSBURG RD. OVER I-195	MONMOUTH
314	202	014.45	1021150	US 202 EB OVER S. BRANCH RARITAN RIVER	HUNTERDON
315	202	030.20	1808163	US 202 OVER CHAMBERS BROOK	SOMERSET
316	202	033.52	1809150	US 202 OVER N BRANCH RARITAN RIVER	SOMERSET
317	202	036.40	1809153	US 202 OVER BRANCH MINE BROOK	SOMERSET
318	206	005.03	0118154	US 206 OVER CLARKS CREEK	ATLANTIC
319	206	062.90	1810156	US 206 OVER READING RAILROAD	SOMERSET
320	206	027.32	0324160	US 206 OVER BARKERS CREEK	BURLINGTON
321	206	038.50	0326153	US 206 SB OVER CROSSWICKS CREEK	BURLINGTON
322	206	045.70	1129150	US 206 OVER SHABAKUNK CREEK	MERCER
323	206	047.22	1129151	US 206 OVER LITTLE SHABAKUNK CREEK	MERCER
324	206	052.60	1129154	US 206 OVER STONY BROOK	MERCER
325	206	062.00	1810155	US 206 OVER CRUSERS BROOK	SOMERSET
326	206	065.20	1810160	US 206 OVER BRANCH OF ROYCES BROOK	SOMERSET
327	206	069.90	1810169	US 206 OVER BRANCH OF RARITAN RIVER	SOMERSET
328	206	069.99	1810170	US 206 OVER RARITAN RIVER	SOMERSET
329	206	116.17	1912150	US 206 OVER DL&W RR ROW, CULVERS BRANCH	SUSSEX
330	206	122.88	1912158	US 206 OVER BRANCH BIG FLAT BROOK	SUSSEX
331	206	123.15	1912160	US 206 OVER BIG FLAT BROOK	SUSSEX
332	206	125.10	1912163	US 206 OVER LITTLE FLAT BROOK	SUSSEX
333	208	001.23	0232153	NJ 208 OVER PLAZA RD.	BERGEN
334	208	001.43	0232154	NJ 208 OVER E-L RR & 20TH ST.	BERGEN
335	208	001.80	0232155	FAIR LAWN AVE. OVER NJ 208	BERGEN
336	208	003.25	0232158	NJ 208 OVER BLVD AVE. & E-L RR	BERGEN
337	208	005.95	0233152	CEDAR HILL AVE. OVER NJ 208	BERGEN
338	208	008.49	0233160	SUMMIT AVE. OVER NJ 208	BERGEN
339	208	009.65	0233164	NJ 208 OVER NYS&W RR	BERGEN
340	280	012.05	0730193	RELOCATED MAIN ST. OVER GSP & ORATON PKY.	ESSEX
341	280	012.95	0730186	HUMBOLT ST. OVER I-280	ESSEX
342	280	013.30	0730192	I-280 WB OVER E-L RR & LOCAL STS.	ESSEX
343	280	014.30	0731159	I-280 RAMP D TO NJ 21	ESSEX

*Location number is keyed to Figure 20.*



**APPENDIX 3**  
**CATEGORY 3 BRIDGE PROBLEMS (CONT'D)**

Loc. No.	Route	Mile- post	Structure No.	Description	County
344	280	014.33	0731155	I-280 OVER BROAD ST. AND PLANE ST.	ESSEX
345	280	014.43	0731160	RAMP A OVER RAMP B	ESSEX
346	287	001.60	1231160	STELTON RD. OVER I-287	MIDDLESEX
347	287	002.05	1231161	WASHINGTON AVE. OVER I-287	MIDDLESEX
348	287	002.90	1231163	I-287 SB OVER S. RANDOLPHVILLE RD.	MIDDLESEX
349	287	003.30	1231164	OLD NEW BRUNSWICK RD. OVER I-287	MIDDLESEX
350	287	007.96	1812158	I-287 OVER RARITAN RIVER & CANAL RD.	SOMERSET
351	287	005.90	1231169	I-287 OVER RARITAN RIVER & EASTON AVE.	MIDDLESEX
352	287	027.50	1419159	GLEN ALPIN RD. OVER I-287	MORRIS
353	287	024.20	1815177	I-287 SB OVER NORTH FINLEY AVE.	SOMERSET
354	287	016.70	1814166	I-78 RAMP H OVER I-287 RAMP A	SOMERSET
355	287	036.60	1419153	CR 511 OVER I-287	MORRIS
356	287	039.80	1420159	INTERVALE RD. (US 202) OVER I-287	MORRIS
357	287	042.77	1420170	I-287 NB OVER MAIN RD. & CROOKED BROOK	MORRIS
358	295	001.60	1711150	I-295 NB OVER NJTPK, SALEM CANAL	SALEM
359	295	005.35	1712156	PENNSGROVE-AUBURN RD. OVER I-295	SALEM
360	295	019.50	0821168	MANTUA GROVE RD. OVER I-295	GLOUCESTER
361	295	023.07	0821179	I-295 OVER HESSIAN RUN	GLOUCESTER
362	295	024.52	0823151	I-295 NB OVER NJ 45 & PRSL RR	GLOUCESTER
363	295	024.52	0823152	I-295 SB OVER PRSL RR & NJ 45	GLOUCESTER
364	295	026.90	0427158	BROWNING RD. (CR659) OVER I-295	CAMDEN
365	295	027.00	0428151	I-295 RAMP D OVER I-76	CAMDEN
366	295	030.25	0428166	I-295 OVER COPELY RD. (CR666)	CAMDEN
367	295	035.60	0429161	CHAPEL AVE. OVER I-295	CAMDEN
368	295	035.80	0429162	I-295 OVER S. BRANCH PENNSAUKEN CREEK	CAMDEN
369	295	045.89	0327170	WOOD-LANE RD. OVER I-295	BURLINGTON
370	295	048.40	0328150	OXMEAD RD. OVER I-295	BURLINGTON
371	295	056.10	0328167	RISING SUN RD. OVER I-295	BURLINGTON
372	322	045.40	0119159	US 322 OVER WATERING BRANCH	ATLANTIC
373	440	000.12	1234150	NJ 440 EB OVER RAMP WI	MIDDLESEX
374	440	002.00	1234170	US 9 SB OVER NJ 440 RAMP GM	MIDDLESEX
375	444	135.30	2014150	MADISON HILL RD. OVER GARDEN ST. PARKWAY	UNION
376	444	137.40	2014158	RARITAN RD. OVER NJ 444	UNION
377	495	001.25	0917154	KENNEDY BLVD. NB OVER NJ 495	HUDSON

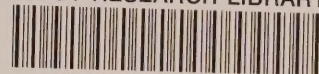
Location number is keyed to Figure 20.

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25		149	Appendix AW	150	Appendix AX
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27		153	Appendix BA	154	Appendix BB
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35		169	Appendix BQ	170	Appendix BR
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37		173	Appendix BU	174	Appendix BV
38		175	Appendix BW	176	Appendix BX
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